

ภาคผนวก ค

ใบรับรองผลการตรวจวัดคุณภาพสิ่งแวดล้อม

ภาคผนวก ค-1

คุณภาพอากาศในบรรยากาศ



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2421707

Date Received : Mar 08, 2024

Date Reported : Mar 13, 2024

Report Number: 2921109-1

Page 1 of 1

Sample Description	Air Quality						
Location	สำนักงานนิคมอุตสาหกรรมตะวันออก(นานาชาติ)(A1)(GPS 47P 0730907, 1405264)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Mar 01, 2024 - Mar 08, 2024						
Measurement by	Saknarin Jaraskay						
Time	2421707-1 Mar 01, 2024	2421707-2 Mar 02, 2024	2421707-3 Mar 03, 2024	2421707-4 Mar 04, 2024	2421707-5 Mar 05, 2024	2421707-6 Mar 06, 2024	2421707-7 Mar 07, 2024
11:00 AM - 12:00 PM	0.003	0.001	<0.001	0.001	0.003	0.006	0.002
12:00 PM - 01:00 PM	<0.001	0.001	<0.001	0.002	<0.001	0.007	0.002
01:00 PM - 02:00 PM	0.004	<0.001	<0.001	0.002	0.001	0.002	0.004
02:00 PM - 03:00 PM	0.006	<0.001	<0.001	0.001	<0.001	0.002	0.003
03:00 PM - 04:00 PM	0.004	<0.001	<0.001	0.001	<0.001	0.002	0.002
04:00 PM - 05:00 PM	0.003	<0.001	<0.001	0.001	<0.001	0.001	0.003
05:00 PM - 06:00 PM	0.001	0.002	<0.001	<0.001	<0.001	<0.001	0.001
06:00 PM - 07:00 PM	0.001	0.002	0.001	<0.001	0.001	0.002	0.002
07:00 PM - 08:00 PM	0.001	0.002	0.002	0.001	<0.001	0.001	<0.001
08:00 PM - 09:00 PM	0.002	0.002	0.001	<0.001	0.002	0.002	0.001
09:00 PM - 10:00 PM	0.002	0.002	0.002	<0.001	0.003	0.003	<0.001
10:00 PM - 11:00 PM	0.001	0.003	<0.001	<0.001	0.004	0.004	0.001
11:00 PM - 12:00 AM	<0.001	0.005	0.001	0.001	0.001	0.003	0.002
12:00 AM - 01:00 AM	<0.001	0.003	0.001	<0.001	0.002	0.002	0.001
01:00 AM - 02:00 AM	<0.001	0.001	<0.001	0.001	0.002	0.002	0.001
02:00 AM - 03:00 AM	<0.001	0.002	0.001	<0.001	0.002	0.002	0.001
03:00 AM - 04:00 AM	<0.001	0.002	<0.001	<0.001	0.002	<0.001	0.002
04:00 AM - 05:00 AM	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	0.002
05:00 AM - 06:00 AM	<0.001	0.001	<0.001	<0.001	0.001	0.002	0.002
06:00 AM - 07:00 AM	<0.001	0.002	0.002	<0.001	0.002	0.002	<0.001
07:00 AM - 08:00 AM	<0.001	0.002	0.001	<0.001	0.001	0.002	<0.001
08:00 AM - 09:00 AM	<0.001	0.001	0.001	0.001	<0.001	0.002	0.001
09:00 AM - 10:00 AM	0.002	0.001	0.002	0.002	0.002	0.003	0.002
10:00 AM - 11:00 AM	0.001	0.001	0.001	<0.001	0.002	0.002	0.002
Average	0.002	0.002	<0.001	0.001	0.001	0.002	0.002
1hr - Maximum	0.006	0.005	0.002	0.002	0.004	0.007	0.004
Standard 1hr - Average	0.170	0.170	0.170	0.170	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

Orawan R.
Orawan Rak Yong
Scientist (3)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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479-101 EMAIL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2421707

Date Received : Mar 08, 2024

Date Reported : Mar 13, 2024

Report Number: 2934922-1

Page 1 of 1

Sample Description	Air Quality						
Location	รัตนวงษ์พน(A2) (GPS 47P 0729828, 1403318)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Mar 01, 2024 - Mar 08, 2024						
Measurement by	Saknarin Jaraskay						
Time	2421707-8 Mar 01, 2024	2421707-9 Mar 02, 2024	2421707-10 Mar 03, 2024	2421707-11 Mar 04, 2024	2421707-12 Mar 05, 2024	2421707-13 Mar 06, 2024	2421707-14 Mar 07, 2024
10:00 AM - 11:00 AM	0.003	0.001	0.001	0.002	0.003	0.006	0.002
11:00 AM - 12:00 PM	<0.001	0.001	<0.001	0.002	<0.001	0.008	0.002
12:00 PM - 01:00 PM	0.004	<0.001	<0.001	0.002	0.001	0.002	0.004
01:00 PM - 02:00 PM	0.006	<0.001	<0.001	0.002	<0.001	0.002	0.004
02:00 PM - 03:00 PM	0.004	<0.001	<0.001	0.002	<0.001	0.002	0.002
03:00 PM - 04:00 PM	0.003	<0.001	<0.001	0.001	<0.001	0.002	0.003
04:00 PM - 05:00 PM	0.002	0.002	<0.001	<0.001	<0.001	0.001	0.002
05:00 PM - 06:00 PM	0.002	0.002	0.001	0.002	0.002	0.002	0.002
06:00 PM - 07:00 PM	0.002	0.002	0.002	0.002	0.001	0.002	0.001
07:00 PM - 08:00 PM	0.002	0.002	0.001	0.001	0.002	0.002	0.001
08:00 PM - 09:00 PM	0.002	0.003	0.002	0.001	0.003	0.003	0.001
09:00 PM - 10:00 PM	0.002	0.003	0.001	0.001	0.004	0.004	0.002
10:00 PM - 11:00 PM	0.001	0.005	0.001	0.001	0.002	0.003	0.002
11:00 PM - 12:00 AM	0.001	0.003	0.001	<0.001	0.002	0.002	0.001
12:00 AM - 01:00 AM	0.001	0.002	0.001	0.001	0.002	0.003	0.002
01:00 AM - 02:00 AM	0.001	0.002	0.002	<0.001	0.002	0.002	0.002
02:00 AM - 03:00 AM	<0.001	0.002	0.001	<0.001	<0.001	0.002	0.001
03:00 AM - 04:00 AM	0.001	0.001	<0.001	0.001	0.002	0.002	<0.001
04:00 AM - 05:00 AM	0.001	0.001	<0.001	<0.001	0.002	0.002	0.002
05:00 AM - 06:00 AM	0.001	0.002	0.002	<0.001	0.002	0.002	<0.001
06:00 AM - 07:00 AM	<0.001	0.002	0.001	0.001	0.002	0.002	<0.001
07:00 AM - 08:00 AM	<0.001	0.002	0.001	0.001	0.002	0.002	0.001
08:00 AM - 09:00 AM	0.002	0.001	0.002	0.002	0.002	0.003	0.002
09:00 AM - 10:00 AM	0.002	0.002	0.002	0.001	0.002	0.002	0.002
Average	0.002	0.002	0.001	0.001	0.002	0.003	0.002
1hr - Maximum	0.006	0.005	0.002	0.002	0.004	0.008	0.004
Standard 1hr - Average	0.170	0.170	0.170	0.170	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

Orawan R.
Orawan Rak Yong
Scientist (3)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2421707

Date Received : Mar 08, 2024

Date Reported : Mar 13, 2024

Report Number: 2934923-1

Page 1 of 1

Sample Description	Air Quality						
Location	วัดบางซื่อ(A3) (GPS 47P 0730826, 1407360)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Mar 01, 2024 - Mar 08, 2024						
Measurement by	Saknarin Jaraskay						
Time	2421707-15 Mar 01, 2024	2421707-16 Mar 02, 2024	2421707-17 Mar 03, 2024	2421707-18 Mar 04, 2024	2421707-19 Mar 05, 2024	2421707-20 Mar 06, 2024	2421707-21 Mar 07, 2024
12:00 PM - 01:00 PM	0.002	0.001	0.009	0.002	0.001	0.003	0.008
01:00 PM - 02:00 PM	0.002	0.002	0.016	0.001	0.001	0.004	0.001
02:00 PM - 03:00 PM	0.002	0.001	0.004	0.001	0.005	0.003	0.002
03:00 PM - 04:00 PM	0.002	0.002	0.005	0.002	0.002	0.011	0.001
04:00 PM - 05:00 PM	0.002	0.001	0.002	0.002	0.002	0.004	0.001
05:00 PM - 06:00 PM	0.001	0.001	0.001	0.001	0.001	0.004	0.001
06:00 PM - 07:00 PM	0.002	0.001	0.001	<0.001	0.001	0.003	0.001
07:00 PM - 08:00 PM	0.001	<0.001	0.001	0.001	0.001	0.002	<0.001
08:00 PM - 09:00 PM	0.001	0.001	0.001	0.001	0.001	0.002	0.001
09:00 PM - 10:00 PM	<0.001	0.001	0.001	0.012	0.003	0.002	0.001
10:00 PM - 11:00 PM	0.001	0.001	0.001	0.015	0.014	0.003	0.001
11:00 PM - 12:00 AM	0.001	0.001	<0.001	0.001	0.008	0.002	<0.001
12:00 AM - 01:00 AM	0.001	<0.001	0.001	0.001	0.002	0.002	<0.001
01:00 AM - 02:00 AM	<0.001	<0.001	<0.001	0.001	0.001	0.002	<0.001
02:00 AM - 03:00 AM	0.001	<0.001	0.001	<0.001	0.001	0.001	<0.001
03:00 AM - 04:00 AM	0.002	<0.001	<0.001	<0.001	0.001	0.001	0.001
04:00 AM - 05:00 AM	0.001	0.001	<0.001	<0.001	<0.001	0.001	0.001
05:00 AM - 06:00 AM	0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001
06:00 AM - 07:00 AM	<0.001	<0.001	0.001	0.001	0.001	0.001	0.001
07:00 AM - 08:00 AM	0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001
08:00 AM - 09:00 AM	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001
09:00 AM - 10:00 AM	0.001	0.001	0.001	0.001	0.001	0.001	<0.001
10:00 AM - 11:00 AM	0.001	0.004	0.001	0.001	0.002	0.002	0.001
11:00 AM - 12:00 PM	0.001	0.002	0.001	0.001	0.002	0.004	<0.001
Average	0.001	0.001	0.002	0.002	0.002	0.003	0.001
1hr - Maximum	0.002	0.004	0.016	0.015	0.014	0.011	0.008
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).

Reference Method : US EPA Method Part 50 App. F (Chemiluminescence)

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand : PHONE +66 0 2760 3000 : FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2421710

Date Received : Mar 08, 2024

Date Reported : Mar 13, 2024

Report Number: 2921108-1

Page 1 of 1

Sample Description	Air Quality						
Location	สำนักงานนิคมอุตสาหกรรมบ้านฉางเขตตะวันออก(บ้านตาพูด)(A1)(GPS 47P 0730907, 1405264)						
Parameter	Sulfur Dioxide (mg/m3)						
Measurement Date	Mar 01, 2024 - Mar 08, 2024						
Measurement by	Saknarin Jaraskay						
Time	2421710-1 Mar 01, 2024	2421710-2 Mar 02, 2024	2421710-3 Mar 03, 2024	2421710-4 Mar 04, 2024	2421710-5 Mar 05, 2024	2421710-6 Mar 06, 2024	2421710-7 Mar 07, 2024
11:00 AM - 12:00 PM	0.0013	0.0016	0.0026	0.0018	0.0018	0.0016	0.0016
12:00 PM - 01:00 PM	0.0016	0.0013	0.0018	0.0016	0.0016	0.0016	0.0016
01:00 PM - 02:00 PM	0.0013	0.0013	0.0018	0.0016	0.0016	0.0016	0.0016
02:00 PM - 03:00 PM	0.0013	0.0013	0.0018	0.0016	0.0018	0.0016	0.0013
03:00 PM - 04:00 PM	0.0013	0.0013	0.0018	0.0016	0.0016	0.0016	0.0016
04:00 PM - 05:00 PM	0.0010	0.0013	0.0018	0.0016	0.0016	0.0016	0.0013
05:00 PM - 06:00 PM	0.0010	0.0013	0.0018	0.0016	0.0016	0.0013	0.0013
06:00 PM - 07:00 PM	0.0013	0.0016	0.0018	0.0016	0.0016	0.0016	0.0016
07:00 PM - 08:00 PM	0.0016	0.0016	0.0018	0.0016	0.0018	0.0016	0.0018
08:00 PM - 09:00 PM	0.0016	0.0016	0.0018	0.0018	0.0018	0.0016	0.0018
09:00 PM - 10:00 PM	0.0016	0.0016	0.0018	0.0018	0.0018	0.0016	0.0016
10:00 PM - 11:00 PM	0.0016	0.0016	0.0018	0.0018	0.0018	0.0016	0.0016
11:00 PM - 12:00 AM	0.0016	0.0016	0.0018	0.0018	0.0018	0.0018	0.0016
12:00 AM - 01:00 AM	0.0016	0.0016	0.0018	0.0018	0.0018	0.0016	0.0016
01:00 AM - 02:00 AM	0.0016	0.0016	0.0018	0.0018	0.0018	0.0016	0.0016
02:00 AM - 03:00 AM	0.0016	0.0013	0.0018	0.0018	0.0018	0.0016	0.0016
03:00 AM - 04:00 AM	0.0016	0.0013	0.0018	0.0018	0.0018	0.0016	0.0016
04:00 AM - 05:00 AM	0.0016	0.0021	0.0016	0.0018	0.0018	0.0016	0.0016
05:00 AM - 06:00 AM	0.0016	0.0026	0.0018	0.0018	0.0021	0.0016	0.0016
06:00 AM - 07:00 AM	0.0016	0.0021	0.0018	0.0018	0.0018	0.0016	0.0016
07:00 AM - 08:00 AM	0.0016	0.0018	0.0018	0.0016	0.0018	0.0018	0.0013
08:00 AM - 09:00 AM	0.0016	0.0029	0.0018	0.0018	0.0018	0.0016	0.0013
09:00 AM - 10:00 AM	0.0016	0.0021	0.0018	0.0018	0.0018	0.0018	0.0013
10:00 AM - 11:00 AM	0.0016	0.0026	0.0018	0.0016	0.0016	0.0016	0.0013
Average (24 hrs)	0.0015	0.0017	0.0019	0.0017	0.0018	0.0016	0.0015
1hr - Maximum	0.0016	0.0029	0.0026	0.0018	0.0021	0.0018	0.0018
Standard 24 hrs - Average	0.3	0.3	0.3	0.3	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

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand : PHONE +66 0 2760 3000 : FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2421710

Date Received : Mar 08, 2024

Date Reported : Mar 13, 2024

Report Number: 2934924-1

Page 1 of 1

Sample Description	Air Quality							
Location	วัดหนองพูน(A2) (GPS 47P 0729828, 1403318)							
Parameter	Sulfur Dioxide (mg/m3)							
Measurement Date	Mar 01, 2024 - Mar 08, 2024							
Measurement by	Saknarin Jaraskay							
Time	2421710-8 Mar 01, 2024	2421710-9 Mar 02, 2024	2421710-10 Mar 03, 2024	2421710-11 Mar 04, 2024	2421710-12 Mar 05, 2024	2421710-13 Mar 06, 2024	2421710-14 Mar 07, 2024	
10:00 AM - 11:00 AM	0.0021	0.0029	0.0013	0.0016	0.0018	0.0016	0.0016	
11:00 AM - 12:00 PM	0.0016	0.0031	0.0013	0.0016	0.0024	0.0016	0.0016	
12:00 PM - 01:00 PM	0.0013	0.0029	0.0016	0.0013	0.0031	0.0016	0.0016	
01:00 PM - 02:00 PM	0.0016	0.0031	0.0013	0.0013	0.0008	0.0013	0.0013	
02:00 PM - 03:00 PM	0.0010	0.0031	0.0003	0.0013	0.0013	0.0013	0.0016	
03:00 PM - 04:00 PM	0.0013	0.0026	0.0010	0.0013	0.0013	0.0013	0.0013	
04:00 PM - 05:00 PM	0.0021	0.0029	0.0005	0.0013	0.0013	0.0013	0.0013	
05:00 PM - 06:00 PM	0.0026	0.0026	0.0008	0.0013	0.0016	0.0016	0.0016	
06:00 PM - 07:00 PM	0.0026	0.0024	0.0016	0.0013	0.0018	0.0016	0.0018	
07:00 PM - 08:00 PM	0.0031	0.0026	0.0016	0.0013	0.0016	0.0016	0.0018	
08:00 PM - 09:00 PM	0.0031	0.0026	0.0016	0.0013	0.0016	0.0016	0.0016	
09:00 PM - 10:00 PM	0.0018	0.0026	0.0016	0.0013	0.0016	0.0016	0.0016	
10:00 PM - 11:00 PM	0.0021	0.0029	0.0016	0.0016	0.0016	0.0016	0.0016	
11:00 PM - 12:00 AM	0.0034	0.0029	0.0016	0.0016	0.0016	0.0016	0.0016	
12:00 AM - 01:00 AM	0.0026	0.0029	0.0016	0.0016	0.0016	0.0016	0.0016	
01:00 AM - 02:00 AM	0.0029	0.0026	0.0016	0.0016	0.0016	0.0016	0.0016	
02:00 AM - 03:00 AM	0.0031	0.0029	0.0016	0.0016	0.0016	0.0016	0.0016	
03:00 AM - 04:00 AM	0.0024	0.0026	0.0016	0.0016	0.0016	0.0016	0.0016	
04:00 AM - 05:00 AM	0.0021	0.0029	0.0016	0.0016	0.0016	0.0016	0.0016	
05:00 AM - 06:00 AM	0.0021	0.0031	0.0016	0.0016	0.0016	0.0016	0.0016	
06:00 AM - 07:00 AM	0.0021	0.0029	0.0016	0.0016	0.0016	0.0016	0.0013	
07:00 AM - 08:00 AM	0.0024	0.0029	0.0016	0.0016	0.0016	0.0016	0.0013	
08:00 AM - 09:00 AM	0.0024	0.0029	0.0016	0.0018	0.0016	0.0016	0.0013	
09:00 AM - 10:00 AM	0.0029	0.0016	0.0016	0.0018	0.0016	0.0016	0.0013	
Average (24 hrs)	0.0023	0.0028	0.0014	0.0015	0.0016	0.0015	0.0015	
1hr - Maximum	0.0034	0.0031	0.0016	0.0018	0.0031	0.0016	0.0018	
Standard 24 hrs - Average	0.3	0.3	0.3	0.3	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



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2421710

Date Received : Mar 08, 2024

Date Reported : Mar 13, 2024

Report Number: 2934925-1

Page 1 of 1

Sample Description	Air Quality							
Location	วัดหนองพูน(A3) (GPS 47P 0730826, 1407360)							
Parameter	Sulfur Dioxide (mg/m3)							
Measurement Date	Mar 01, 2024 - Mar 08, 2024							
Measurement by	Saknarin Jaraskay							
Time	2421710-15 Mar 01, 2024	2421710-16 Mar 02, 2024	2421710-17 Mar 03, 2024	2421710-18 Mar 04, 2024	2421710-19 Mar 05, 2024	2421710-20 Mar 06, 2024	2421710-21 Mar 07, 2024	
12:00 PM - 01:00 PM	0.0042	0.0050	0.0034	0.0045	0.0047	0.0060	0.0063	
01:00 PM - 02:00 PM	0.0037	0.0052	0.0034	0.0042	0.0042	0.0060	0.0050	
02:00 PM - 03:00 PM	0.0034	0.0050	0.0037	0.0042	0.0042	0.0055	0.0050	
03:00 PM - 04:00 PM	0.0037	0.0052	0.0034	0.0052	0.0052	0.0052	0.0050	
04:00 PM - 05:00 PM	0.0031	0.0052	0.0024	0.0060	0.0045	0.0055	0.0050	
05:00 PM - 06:00 PM	0.0034	0.0047	0.0031	0.0052	0.0050	0.0055	0.0039	
06:00 PM - 07:00 PM	0.0042	0.0050	0.0026	0.0047	0.0050	0.0058	0.0052	
07:00 PM - 08:00 PM	0.0047	0.0047	0.0029	0.0052	0.0050	0.0055	0.0055	
08:00 PM - 09:00 PM	0.0047	0.0045	0.0026	0.0052	0.0052	0.0055	0.0055	
09:00 PM - 10:00 PM	0.0052	0.0047	0.0024	0.0055	0.0050	0.0055	0.0063	
10:00 PM - 11:00 PM	0.0052	0.0047	0.0026	0.0055	0.0047	0.0058	0.0060	
11:00 PM - 12:00 AM	0.0039	0.0047	0.0029	0.0050	0.0045	0.0063	0.0058	
12:00 AM - 01:00 AM	0.0042	0.0050	0.0029	0.0047	0.0045	0.0063	0.0052	
01:00 AM - 02:00 AM	0.0055	0.0050	0.0024	0.0042	0.0045	0.0047	0.0050	
02:00 AM - 03:00 AM	0.0047	0.0050	0.0029	0.0050	0.0029	0.0052	0.0058	
03:00 AM - 04:00 AM	0.0050	0.0047	0.0034	0.0045	0.0039	0.0050	0.0052	
04:00 AM - 05:00 AM	0.0052	0.0050	0.0042	0.0047	0.0039	0.0047	0.0055	
05:00 AM - 06:00 AM	0.0045	0.0047	0.0042	0.0052	0.0050	0.0052	0.0055	
06:00 AM - 07:00 AM	0.0042	0.0050	0.0037	0.0052	0.0052	0.0060	0.0060	
07:00 AM - 08:00 AM	0.0042	0.0052	0.0034	0.0055	0.0052	0.0065	0.0060	
08:00 AM - 09:00 AM	0.0042	0.0050	0.0026	0.0047	0.0052	0.0065	0.0060	
09:00 AM - 10:00 AM	0.0045	0.0050	0.0029	0.0047	0.0055	0.0058	0.0058	
10:00 AM - 11:00 AM	0.0045	0.0050	0.0024	0.0039	0.0058	0.0055	0.0060	
11:00 AM - 12:00 PM	0.0050	0.0037	0.0026	0.0045	0.0058	0.0058	0.0063	
Average (24 hrs)	0.0044	0.0049	0.0030	0.0049	0.0048	0.0056	0.0055	
1hr - Maximum	0.0055	0.0052	0.0042	0.0060	0.0058	0.0065	0.0063	
Standard 24 hrs - Average	0.3	0.3	0.3	0.3	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

Orawan R.

Orawan Rakyong
Scientist (3)

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Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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Analysis / Test Report



TESTING
No.0042

Lot ID: 2421711

Date Received : Mar 08, 2024

Date Reported : Mar 13, 2024

Report Number: 2921114-1

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Page 1 of 1

Sample Description		Air Quality			
Location		สำนักงานนิคมอุตสาหกรรมต้นผึ้งเขตวังอลอ(มาบตาพุด)(A1)(GPS 47P 0730907, 1405264)			
Date Analysis Commenced		Mar 09, 2024			
Condition of Sample		Drawn into one 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)
2421711-1	Mar 01 - Mar 02, 2024	0.035	0.020	758	32
2421711-2	Mar 02 - Mar 03, 2024	0.048	0.023	758	32
2421711-3	Mar 03 - Mar 04, 2024	0.042	0.021	758	30
2421711-4	Mar 04 - Mar 05, 2024	0.045	0.006	758	30
2421711-5	Mar 05 - Mar 06, 2024	0.039	0.018	758	32
2421711-6	Mar 06 - Mar 07, 2024	0.038	0.019	758	32
2421711-7	Mar 07 - Mar 08, 2024	0.033	0.016	758	32
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B

Particulate Matter (PM-10) : US EPA 40 CFR Part 50 Appendix J

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

Sampled By : Saknarin Jaraskay

Remark :

- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report 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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479-101 / EMAIL



Analysis / Test Report



TESTING
No.0042

Lot ID: 2421711

Date Received : Mar 08, 2024

Date Reported : Mar 13, 2024

Report Number: 2921114-2

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Page 1 of 1

Sample Description		Air Quality			
Location		วัดหนองเพน(A2) (GPS 47P 0729828, 1403318)			
Date Analysis Commenced		Mar 09, 2024			
Condition of Sample		Drawn into one 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)
2421711-8	Mar 01 - Mar 02, 2024	0.054	0.023	758	32
2421711-9	Mar 02 - Mar 03, 2024	0.050	0.031	758	32
2421711-10	Mar 03 - Mar 04, 2024	0.044	0.026	758	30
2421711-11	Mar 04 - Mar 05, 2024	0.189	0.044	758	30
2421711-12	Mar 05 - Mar 06, 2024	0.045	0.022	758	32
2421711-13	Mar 06 - Mar 07, 2024	0.049	0.023	758	32
2421711-14	Mar 07 - Mar 08, 2024	0.046	0.022	758	32
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B

Particulate Matter (PM-10) : US EPA 40 CFR Part 50 Appendix J

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

Sampled By : Saknarin Jaraskay

Remark :

- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report



TESTING
No.0042

Lot ID: 2421711

Date Received : Mar 08, 2024

Date Reported : Mar 13, 2024

Report Number: 2921114-3

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Page 1 of 1

Sample Description		Air Quality			
Location		วัดนาบึง(๓) (GPS 47P 0730826, 1407360)			
Date Analysis Commenced		Mar 09, 2024			
Condition of Sample		Drawn into one 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)
2421711-15	Mar 01 - Mar 02, 2024	0.070	0.030	758	32
2421711-16	Mar 02 - Mar 03, 2024	0.092	0.033	758	32
2421711-17	Mar 03 - Mar 04, 2024	0.068	0.028	758	30
2421711-18	Mar 04 - Mar 05, 2024	0.051	0.031	758	30
2421711-19	Mar 05 - Mar 06, 2024	0.105	0.034	758	32
2421711-20	Mar 06 - Mar 07, 2024	0.111	0.039	758	32
2421711-21	Mar 07 - Mar 08, 2024	0.150	0.044	758	32
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B

Particulate Matter (PM-10) : US EPA 40 CFR Part 50 Appendix J

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

Sampled By : Saknarin Jaraskay

Remark :

- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2422819

Date Received : Mar 08, 2024

Date Reported : Mar 14, 2024

Report Number : 2921148-1

Page 1 of 2

Sample Number : 2422819-1 to 7
Parameter : Wind Speed / Wind Direction
Location : สำนักงานนิคมอุตสาหกรรมต้นบึงหลวงและตะวันออก (นาบึงหลวง) (A1) (GPS 47P 0730907, 1405264)
Sampling Date : Mar 01 - Mar 08, 2024
Sampling by : Saknarin Jaraskay

Time	Mar 01 - Mar 02, 2024			Mar 02 - Mar 03, 2024			Mar 03 - Mar 04, 2024			Mar 04 - Mar 05, 2024			Mar 05 - Mar 06, 2024			Mar 06 - Mar 07, 2024			Mar 07 - Mar 08, 2024		
	WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)	
11:00 AM - 12:00 PM	2.2	246.0	WSW	1.1	218.0	SW	1.3	251.0	WSW	1.1	197.0	SSW	2.3	186.0	S	1.8	110.0	ESE	1.3	130.0	SE
12:00 PM - 01:00 PM	1.3	242.0	WSW	2.0	188.0	S	1.5	135.0	SE	2.4	248.0	WSW	1.8	244.0	WSW	1.6	232.0	SW	1.5	221.0	SW
01:00 PM - 02:00 PM	1.4	246.0	WSW	3.1	213.0	SSW	1.9	219.0	SW	2.5	265.0	W	3.1	203.0	SSW	3.4	168.0	SSE	3.4	192.0	SSW
02:00 PM - 03:00 PM	3.5	239.0	WSW	2.8	270.0	W	1.1	221.0	SW	2.2	241.0	WSW	0.5	132.0	SE	1.6	198.0	SSW	1.6	182.0	S
03:00 PM - 04:00 PM	3.1	268.0	W	2.9	200.0	SSW	2.7	222.0	SW	3.1	242.0	WSW	3.1	194.0	SSW	1.7	143.0	SE	1.4	194.0	SSW
04:00 PM - 05:00 PM	3.1	200.0	SSW	1.6	236.0	SW	1.9	264.0	W	0.4	179.0	S	1.3	146.0	SE	3.3	236.0	SW	1.7	247.0	WSW
05:00 PM - 06:00 PM	1.1	248.0	WSW	2.5	205.0	SSW	1.7	241.0	WSW	2.3	154.0	SSE	1.7	139.0	SE	0.7	136.0	SE	2.8	197.0	SSW
06:00 PM - 07:00 PM	1.6	226.0	SW	2.0	210.0	SSW	1.1	259.0	W	1.7	103.0	ESE	3.7	209.0	SSW	1.5	132.0	SE	0.7	230.0	SW
07:00 PM - 08:00 PM	0.5	260.0	W	0.7	286.0	WNW	0.8	259.0	W	0.6	227.0	SW	1.7	255.0	WSW	2.1	206.0	SSW	0.5	145.0	SE
08:00 PM - 09:00 PM	2.4	203.0	SSW	1.4	254.0	WSW	0.5	159.0	SSE	0.6	236.0	SW	2.8	200.0	SSW	1.2	93.0	E	1.7	226.0	SW
09:00 PM - 10:00 PM	1.3	254.0	WSW	1.2	130.0	SE	0.9	281.0	W	1.0	276.0	W	1.6	262.0	W	1.2	237.0	WSW	0.7	101.0	E
10:00 PM - 11:00 PM	0.5	113.0	ESE	1.3	227.0	SW	0.5	208.0	SSW	1.9	260.0	W	1.4	153.0	SSE	2.5	264.0	W	0.7	49.0	NE
11:00 PM - 12:00 AM	0.3	59.0	ENE	0.8	157.0	SSE	1.3	218.0	SW	2.0	255.0	WSW	1.0	259.0	W	2.0	90.0	E	1.8	253.0	WSW
12:00 AM - 01:00 AM	0.7	123.0	ESE	1.2	265.0	W	3.6	198.0	SSW	3.5	194.0	SSW	1.0	264.0	W	0.6	76.0	ENE	1.4	137.0	SE
01:00 AM - 02:00 AM	1.6	236.0	SW	1.2	235.0	SW	0.7	174.0	S	1.5	252.0	WSW	1.2	203.0	SSW	0.0	-	-	2.5	210.0	SSW
02:00 AM - 03:00 AM	1.7	238.0	WSW	0.5	268.0	W	1.8	259.0	W	2.3	249.0	WSW	0.1	-	-	1.5	243.0	WSW	3.5	126.0	SE
03:00 AM - 04:00 AM	2.0	206.0	SSW	2.0	270.0	W	2.7	221.0	SW	0.3	236.0	SW	0.0	-	-	1.7	248.0	WSW	0.6	273.0	W
04:00 AM - 05:00 AM	1.9	225.0	SW	3.0	258.0	WSW	1.7	234.0	SW	0.7	246.0	WSW	0.9	150.0	SSE	1.4	141.0	SE	2.2	249.0	WSW
05:00 AM - 06:00 AM	2.4	251.0	WSW	1.9	249.0	WSW	1.8	222.0	SW	1.6	171.0	S	0.7	144.0	SE	0.0	-	-	1.6	135.0	SE
06:00 AM - 07:00 AM	1.7	293.0	WNW	1.3	50.0	NE	1.6	245.0	WSW	1.4	221.0	SW	1.0	159.0	SSE	0.2	-	-	0.7	246.0	WSW
07:00 AM - 08:00 AM	1.1	243.0	WSW	1.3	335.0	NNW	2.5	246.0	WSW	1.0	188.0	S	1.8	193.0	SSW	1.2	139.0	SE	1.1	253.0	WSW
08:00 AM - 09:00 AM	1.0	245.0	WSW	0.0	-	-	0.6	268.0	W	1.5	253.0	WSW	0.8	148.0	SSE	1.6	257.0	WSW	2.2	136.0	SE
09:00 AM - 10:00 AM	1.9	241.0	WSW	0.2	-	-	2.2	247.0	WSW	1.9	248.0	WSW	1.7	240.0	WSW	1.4	200.0	SSW	2.1	140.0	SE
10:00 AM - 11:00 AM	1.7	191.0	S	0.2	-	-	1.4	249.0	WSW	0.8	221.0	SW	1.4	145.0	SE	1.6	213.0	SSW	1.5	150.0	SSE

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

Approved by

Sarayu J.

Sarayu Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2422819

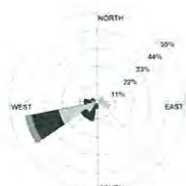
Date Received : Mar 08, 2024

Date Reported : Mar 14, 2024

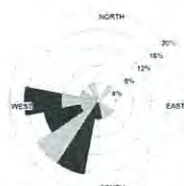
Report Number : 2921148-1

Page 2 of 2

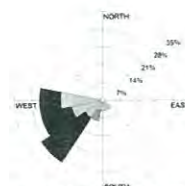
Wind Rose



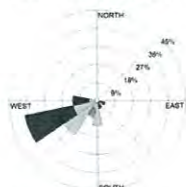
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Date : Mar 02-03, 2024



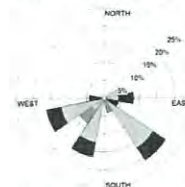
Date : Mar 03-04, 2024



Date : Mar 04-05, 2024



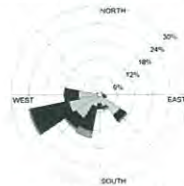
Date : Mar 05-06, 2024



Date : Mar 06-07, 2024



Date : Mar 07-08, 2024



Date : Mar 01-08, 2024

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	4.76
1.7-3.3	37.50
0.3-1.7	52.98
Calms	4.76

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Approved by

Sarayuth Jittrantorn
Assistant General Manager



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241449
Date Received :Jan 16, 2024
Date Reported :Jan 22, 2024
Report Number :2878109-1

Page 1 of 2

Sample Number : 241449-1
Parameter : Wind Speed / Wind Direction
Location : ตำบลบ้านดอน อำเภอเมืองระยอง (บ้านท่าหิน)(A1) (GPS 47P 0730907, 1405264)
Sampling Date : Jan 15 - Jan 16, 2024
Sampling by : Tinnakorn Kulchart

Time	Jan 15 - Jan 16, 2024																	
	WS (m/s)	WD (deg)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
10:00 AM - 11:00 AM	2.5	64.0	ENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	3.4	58.0	ENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	1.1	305.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.3	300.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.3	265.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.3	327.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	2.2	148.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.8	303.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.3	283.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.8	300.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.9	294.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.5	308.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.3	29.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.5	30.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.8	26.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.4	13.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.1	36.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminum Vane Method

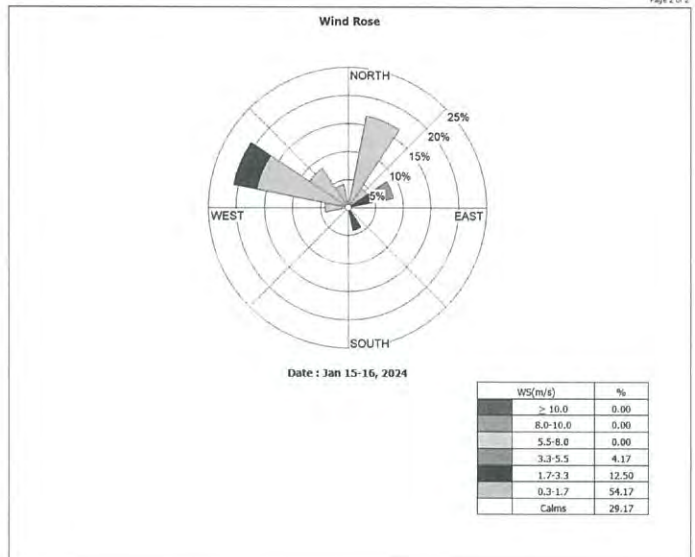


Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241449
Date Received :Jan 16, 2024
Date Reported :Jan 22, 2024
Report Number :2878109-1

Page 2 of 2



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Sarayuht Jitranont

Assistant General Manager

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Sarayuht Jitranont

Assistant General Manager

ADDRESS 104 Phatthanakan Rd., Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand / PHONE +66 0 2760 3000 / FAX +66 0 2760 3197
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ADDRESS 104 Phatthanakan Rd., Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand / PHONE +66 0 2760 3000 / FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241449
Date Received :Jan 16, 2024
Date Reported :Jan 22, 2024
Report Number :2878109-1

Page 1 of 2

Sample Number : 241449-2
Parameter : Wind Speed / Wind Direction
Location : บ้านนาหว้า (A2) (GPS 47P 0729828, 1403318)
Sampling Date : Jan 15 - Jan 16, 2024
Sampling by : Tinnakorn Kulchart

Time	Jan 15 - Jan 16, 2024																	
	WS (m/s)	WD (deg)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
10:00 AM - 11:00 AM	1.3	342.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.7	229.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	1.0	155.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	2.7	216.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.1	153.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	1.6	162.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	2.0	195.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.7	148.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.7	138.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.3	64.0	ENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	1.0	154.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.3	87.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.4	316.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.8	11.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.5	35.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.2	48.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminum Vane Method

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Assistant General Manager

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ADDRESS 104 Phatthanakan Rd., Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand / PHONE +66 0 2760 3000 / FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241449
Date Received : Jan 16, 2024
Date Reported : Jan 22, 2024
Report Number : 2878109-1

Page 1 of 2

Time	Jan 15 - Jan 16, 2024																									
	WS (m/s)	WD (deg)																								
10:00 AM - 11:00 AM	0.7	21.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.6	13.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.6	149.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.7	227.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.6	203.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.5	235.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.8	280.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.0	244.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	1.2	275.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.6	289.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.5	288.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.8	299.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.7	299.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	1.4	300.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.4	299.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.3	299.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.6	299.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.4	299.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.5	38.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.4	150.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.6	22.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	1.4	41.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.4	13.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	2.0	38.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuht Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 1 of 24

Sample Number	241452-1
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	สถานีตรวจวัดคุณภาพอากาศในบริเวณแหล่งอุตสาหกรรม(บางปะกอก)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	15/01/24 - 16/01/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	15/01/24 - 16/01/24	ug/m3	0.10	0.34	<0.34	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	15/01/24 - 16/01/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	15/01/24 - 16/01/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	15/01/24 - 16/01/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	15/01/24 - 16/01/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	15/01/24 - 16/01/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	15/01/24 - 16/01/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	15/01/24 - 16/01/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
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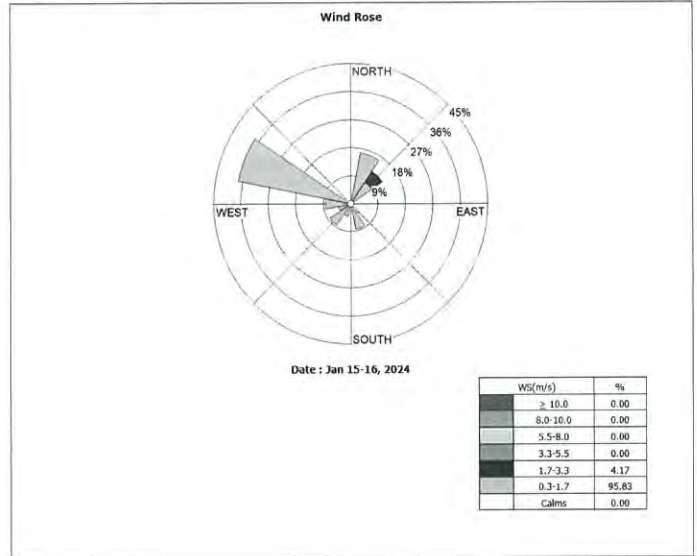


Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241449
Date Received : Jan 16, 2024
Date Reported : Jan 22, 2024
Report Number : 2878109-1

Page 2 of 2



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Assistant General Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 2 of 24

Sample Number	241452-1
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	สถานีตรวจวัดคุณภาพอากาศในบริเวณแหล่งอุตสาหกรรม(บางปะกอก)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	15/01/24 - 16/01/24	ug/m3	0.07	0.20	0.32	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	15/01/24 - 16/01/24	ug/m3	0.08	0.23	<0.23	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	15/01/24 - 16/01/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	15/01/24 - 16/01/24	ug/m3	0.04	0.11	0.13	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	15/01/24 - 16/01/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	15/01/24 - 16/01/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	15/01/24 - 16/01/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	15/01/24 - 16/01/24	ug/m3	0.50	1.52	3.27	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	15/01/24 - 16/01/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	15/01/24 - 16/01/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 3 of 24

Sample Number : 241452-1
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ตำบลบางตะกวน อำเภอเมืองระยอง (บางตะกวน)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanone	15/01/24 - 16/01/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	15/01/24 - 16/01/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	15/01/24 - 16/01/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	15/01/24 - 16/01/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	15/01/24 - 16/01/24	ug/m3	0.05	0.18	7.54	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	15/01/24 - 16/01/24	ug/m3	0.08	0.24	16.53	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	15/01/24 - 16/01/24	ug/m3	0.30	0.84	1.31	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	15/01/24 - 16/01/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	15/01/24 - 16/01/24	ug/m3	0.07	0.22	0.52	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	15/01/24 - 16/01/24	ug/m3	0.05	0.16	2.30	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	15/01/24 - 16/01/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

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Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number : 241452-1
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ตำบลบางตะกวน อำเภอเมืองระยอง (บางตะกวน)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	15/01/24 - 16/01/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	15/01/24 - 16/01/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	15/01/24 - 16/01/24	ug/m3	0.06	0.19	0.47	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	15/01/24 - 16/01/24	ug/m3	0.49	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	15/01/24 - 16/01/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	15/01/24 - 16/01/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	15/01/24 - 16/01/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	15/01/24 - 16/01/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	15/01/24 - 16/01/24	ug/m3	0.08	0.24	0.39	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	15/01/24 - 16/01/24	ug/m3	0.30	1.03	8.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number : 241452-1
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ตำบลบางตะกวน อำเภอเมืองระยอง (บางตะกวน)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	15/01/24 - 16/01/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	15/01/24 - 16/01/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	15/01/24 - 16/01/24	ug/m3	0.60	1.72	<1.72	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	15/01/24 - 16/01/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	15/01/24 - 16/01/24	ug/m3	0.80	2.47	3.56	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	15/01/24 - 16/01/24	ug/m3	0.06	0.17	1.46	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	15/01/24 - 16/01/24	ug/m3	0.30	0.94	10.51	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	15/01/24 - 16/01/24	ug/m3	0.70	2.17	<2.17	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	15/01/24 - 16/01/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	15/01/24 - 16/01/24	ug/m3	0.60	1.76	1.90	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	15/01/24 - 16/01/24	ug/m3	0.40	1.15	1.29	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number : 241452-1
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ตำบลบางตะกวน อำเภอเมืองระยอง (บางตะกวน)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	15/01/24 - 16/01/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	15/01/24 - 16/01/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	15/01/24 - 16/01/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	15/01/24 - 16/01/24	ug/m3	0.20	0.66	28.51	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	15/01/24 - 16/01/24	ug/m3	0.50	1.47	2.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	15/01/24 - 16/01/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	15/01/24 - 16/01/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	15/01/24 - 16/01/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	15/01/24 - 16/01/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	15/01/24 - 16/01/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	15/01/24 - 16/01/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number : 241452-1
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ตำบลหนองแวง อำเภอนางรอง จังหวัดบุรีรัมย์ (บ้านท่าเรือ) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

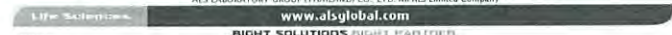
Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	15/01/24 - 16/01/24	ug/m3	0.50	1.48	1.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	15/01/24 - 16/01/24	ug/m3	0.50	1.19	1.24	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	15/01/24 - 16/01/24	ug/m3	0.30	0.86	6.13	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	15/01/24 - 16/01/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	15/01/24 - 16/01/24	ug/m3	0.11	0.34	0.41	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	15/01/24 - 16/01/24	ug/m3	0.60	1.88	5.43	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	15/01/24 - 16/01/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	15/01/24 - 16/01/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	15/01/24 - 16/01/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	15/01/24 - 16/01/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	15/01/24 - 16/01/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Senior Manager

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



479-001 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 8 of 24

Sample Number : 241452-1
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ตำบลหนองแวง อำเภอนางรอง จังหวัดบุรีรัมย์ (บ้านท่าเรือ) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	15/01/24 - 16/01/24	ug/m3	0.04	0.13	<0.13	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :
NEB : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Tinnakorn Kulchart

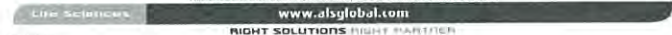
Remark :
LOD : Limit of Detection
<"> : Lower than 10Q (Limit of Quantitation) / LOR (Limit of Reporting)

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479-001 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number : 241452-2
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ตำบลหนองแวง อำเภอนางรอง จังหวัดบุรีรัมย์ (บ้านท่าเรือ) (A2) GPS 47P 0729828, 1403318
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	15/01/24 - 16/01/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	15/01/24 - 16/01/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	15/01/24 - 16/01/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	15/01/24 - 16/01/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	15/01/24 - 16/01/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	15/01/24 - 16/01/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	15/01/24 - 16/01/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	15/01/24 - 16/01/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	15/01/24 - 16/01/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Senior Manager

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479-001 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 10 of 24

Sample Number : 241452-2
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ตำบลหนองแวง อำเภอนางรอง จังหวัดบุรีรัมย์ (บ้านท่าเรือ) (A2) GPS 47P 0729828, 1403318
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	15/01/24 - 16/01/24	ug/m3	0.07	0.20	0.24	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	15/01/24 - 16/01/24	ug/m3	0.08	0.23	<0.23	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	15/01/24 - 16/01/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	15/01/24 - 16/01/24	ug/m3	0.04	0.11	0.13	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	15/01/24 - 16/01/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	15/01/24 - 16/01/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	15/01/24 - 16/01/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	15/01/24 - 16/01/24	ug/m3	0.50	1.52	1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	15/01/24 - 16/01/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	15/01/24 - 16/01/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number	241452-2
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	เสนาสนะวัด(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanone	15/01/24 - 16/01/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	15/01/24 - 16/01/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	15/01/24 - 16/01/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	15/01/24 - 16/01/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	15/01/24 - 16/01/24	ug/m3	0.05	0.18	8.08	960	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	15/01/24 - 16/01/24	ug/m3	0.08	0.24	16.30	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	15/01/24 - 16/01/24	ug/m3	0.30	0.84	1.27	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	15/01/24 - 16/01/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	15/01/24 - 16/01/24	ug/m3	0.07	0.22	0.48	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	15/01/24 - 16/01/24	ug/m3	0.05	0.16	2.11	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	15/01/24 - 16/01/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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479-102 (MAL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number	241452-2
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	เสนาสนะวัด(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	15/01/24 - 16/01/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	15/01/24 - 16/01/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	15/01/24 - 16/01/24	ug/m3	0.08	0.19	0.85	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	15/01/24 - 16/01/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	15/01/24 - 16/01/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	15/01/24 - 16/01/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	15/01/24 - 16/01/24	ug/m3	0.60	1.77	3.11	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	15/01/24 - 16/01/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	15/01/24 - 16/01/24	ug/m3	0.08	0.24	0.29	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	15/01/24 - 16/01/24	ug/m3	0.30	1.03	5.70	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number	241452-2
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	เสนาสนะวัด(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	15/01/24 - 16/01/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	15/01/24 - 16/01/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	15/01/24 - 16/01/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	15/01/24 - 16/01/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	15/01/24 - 16/01/24	ug/m3	0.80	2.47	3.76	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	15/01/24 - 16/01/24	ug/m3	0.06	0.17	1.18	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	15/01/24 - 16/01/24	ug/m3	0.30	0.94	13.38	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	15/01/24 - 16/01/24	ug/m3	0.70	2.17	<2.17	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	15/01/24 - 16/01/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	15/01/24 - 16/01/24	ug/m3	0.60	1.76	<1.76	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	15/01/24 - 16/01/24	ug/m3	0.40	1.15	1.38	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number	241452-2
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	เสนาสนะวัด(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	15/01/24 - 16/01/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	15/01/24 - 16/01/24	ug/m3	1.50	4.34	<4.34	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	15/01/24 - 16/01/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	15/01/24 - 16/01/24	ug/m3	0.20	0.66	20.91	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	15/01/24 - 16/01/24	ug/m3	0.50	1.47	1.83	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	15/01/24 - 16/01/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	15/01/24 - 16/01/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	15/01/24 - 16/01/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	15/01/24 - 16/01/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	15/01/24 - 16/01/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	15/01/24 - 16/01/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

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Sample Number : 241452-2
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0728028, 1403318)
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	15/01/24 - 16/01/24	ug/m3	0.50	1.48	1.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	15/01/24 - 16/01/24	ug/m3	0.50	1.19	<1.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	15/01/24 - 16/01/24	ug/m3	0.30	0.86	4.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	15/01/24 - 16/01/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	15/01/24 - 16/01/24	ug/m3	0.11	0.34	<0.34	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	15/01/24 - 16/01/24	ug/m3	0.60	1.88	3.92	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	15/01/24 - 16/01/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	15/01/24 - 16/01/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	15/01/24 - 16/01/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	15/01/24 - 16/01/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	15/01/24 - 16/01/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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479-1021 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 16 of 24

Sample Number : 241452-2
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0728028, 1403318)
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	15/01/24 - 16/01/24	ug/m3	0.04	0.13	0.20	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).

Sampled By : Tinnakorn Kulchart

Remark :

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

Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 17 of 24

Sample Number : 241452-3
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	15/01/24 - 16/01/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	15/01/24 - 16/01/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	15/01/24 - 16/01/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	15/01/24 - 16/01/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	15/01/24 - 16/01/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	15/01/24 - 16/01/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	15/01/24 - 16/01/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.46	<2.46	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	15/01/24 - 16/01/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	15/01/24 - 16/01/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 18 of 24

Sample Number : 241452-3
Sampled Date : Jan 15, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Jan 17, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	15/01/24 - 16/01/24	ug/m3	0.07	0.20	0.24	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	15/01/24 - 16/01/24	ug/m3	0.08	0.23	<0.23	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	15/01/24 - 16/01/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	15/01/24 - 16/01/24	ug/m3	0.04	0.11	0.27	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	15/01/24 - 16/01/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	15/01/24 - 16/01/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	15/01/24 - 16/01/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	15/01/24 - 16/01/24	ug/m3	0.50	1.52	1.94	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	15/01/24 - 16/01/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	15/01/24 - 16/01/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

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21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 19 of 24

Sample Number	241452-3
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanone	15/01/24 - 16/01/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	15/01/24 - 16/01/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	15/01/24 - 16/01/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	15/01/24 - 16/01/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	15/01/24 - 16/01/24	ug/m3	0.05	0.18	10.03	960	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	15/01/24 - 16/01/24	ug/m3	0.08	0.24	16.34	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	15/01/24 - 16/01/24	ug/m3	0.30	0.84	1.74	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	15/01/24 - 16/01/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	15/01/24 - 16/01/24	ug/m3	0.07	0.22	0.35	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	15/01/24 - 16/01/24	ug/m3	0.05	0.16	2.04	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	15/01/24 - 16/01/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

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479-101 (P&M)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 20 of 24

Sample Number	241452-3
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	15/01/24 - 16/01/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	15/01/24 - 16/01/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	15/01/24 - 16/01/24	ug/m3	0.06	0.19	0.39	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	15/01/24 - 16/01/24	ug/m3	0.49	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	15/01/24 - 16/01/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	15/01/24 - 16/01/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	15/01/24 - 16/01/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	15/01/24 - 16/01/24	ug/m3	0.60	1.77	1.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	15/01/24 - 16/01/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	15/01/24 - 16/01/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	15/01/24 - 16/01/24	ug/m3	0.30	1.03	3.14	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 21 of 24

Sample Number	241452-3
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	15/01/24 - 16/01/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	15/01/24 - 16/01/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	15/01/24 - 16/01/24	ug/m3	0.60	1.72	<1.72	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	15/01/24 - 16/01/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	15/01/24 - 16/01/24	ug/m3	0.80	2.47	3.76	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	15/01/24 - 16/01/24	ug/m3	0.06	0.17	1.46	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	15/01/24 - 16/01/24	ug/m3	0.30	0.94	14.40	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	15/01/24 - 16/01/24	ug/m3	0.70	2.17	<2.17	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	15/01/24 - 16/01/24	ug/m3	0.60	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	15/01/24 - 16/01/24	ug/m3	0.60	1.76	<1.76	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	15/01/24 - 16/01/24	ug/m3	0.40	1.15	1.29	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 241452
Date Received : Jan 16, 2024
Date Reported : Jan 19, 2024
Report Number : 2878114-1

Page 22 of 24

Sample Number	241452-3
Sampled Date	Jan 15, 2024
Sample Description	Air Quality
Location	๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced	Jan 17, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	15/01/24 - 16/01/24	ug/m3	0.50	1.39	<1.39	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	15/01/24 - 16/01/24	ug/m3	1.50	4.34	<4.34	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	15/01/24 - 16/01/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	15/01/24 - 16/01/24	ug/m3	0.20	0.66	24.90	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	15/01/24 - 16/01/24	ug/m3	0.50	1.47	2.36	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	15/01/24 - 16/01/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	15/01/24 - 16/01/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	15/01/24 - 16/01/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	15/01/24 - 16/01/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	15/01/24 - 16/01/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	15/01/24 - 16/01/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Sample Number : 249854-1
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : ตำบลนาเกลืออุตสาหกรรมพื้นที่บริเวณสวนผลไม้(นาเกลือ)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	01/02/24 - 02/02/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	01/02/24 - 02/02/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	01/02/24 - 02/02/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	01/02/24 - 02/02/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	01/02/24 - 02/02/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	01/02/24 - 02/02/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	01/02/24 - 02/02/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromomethane	01/02/24 - 02/02/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	01/02/24 - 02/02/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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479-011 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Sample Number : 249854-1
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : ตำบลนาเกลืออุตสาหกรรมพื้นที่บริเวณสวนผลไม้(นาเกลือ)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	01/02/24 - 02/02/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	01/02/24 - 02/02/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	01/02/24 - 02/02/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	01/02/24 - 02/02/24	ug/m3	0.04	0.11	0.18	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	01/02/24 - 02/02/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	01/02/24 - 02/02/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	01/02/24 - 02/02/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	01/02/24 - 02/02/24	ug/m3	0.50	1.52	<1.52	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	01/02/24 - 02/02/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	01/02/24 - 02/02/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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479-011 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Sample Number : 249854-1
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : ตำบลนาเกลืออุตสาหกรรมพื้นที่บริเวณสวนผลไม้(นาเกลือ)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentane	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	01/02/24 - 02/02/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	01/02/24 - 02/02/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	01/02/24 - 02/02/24	ug/m3	0.05	0.18	5.30	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	01/02/24 - 02/02/24	ug/m3	0.08	0.24	10.21	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	01/02/24 - 02/02/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	01/02/24 - 02/02/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	01/02/24 - 02/02/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	01/02/24 - 02/02/24	ug/m3	0.05	0.16	1.02	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	01/02/24 - 02/02/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Dej Changchon
Senior Manager

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479-011 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Sample Number : 249854-1
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : ตำบลนาเกลืออุตสาหกรรมพื้นที่บริเวณสวนผลไม้(นาเกลือ)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	01/02/24 - 02/02/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	01/02/24 - 02/02/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	01/02/24 - 02/02/24	ug/m3	0.06	0.19	<0.19	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	01/02/24 - 02/02/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	01/02/24 - 02/02/24	ug/m3	0.05	0.16	Not Detected	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	01/02/24 - 02/02/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	01/02/24 - 02/02/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	01/02/24 - 02/02/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	01/02/24 - 02/02/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	01/02/24 - 02/02/24	ug/m3	0.30	1.03	1.94	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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479-011 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Page 5 of 24

Sample Number	249854-1
Sampled Date	Feb 01, 2024
Sample Description	Air Quality
Location	สถานีควบคุมคุณภาพสิ่งแวดล้อมและโรงงาน(บางปะกง)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced	Feb 05, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	01/02/24 - 02/02/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	01/02/24 - 02/02/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	01/02/24 - 02/02/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	01/02/24 - 02/02/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	01/02/24 - 02/02/24	ug/m3	0.80	2.47	2.97	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	01/02/24 - 02/02/24	ug/m3	0.06	0.17	0.90	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	01/02/24 - 02/02/24	ug/m3	0.30	0.94	5.28	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	01/02/24 - 02/02/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	01/02/24 - 02/02/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	01/02/24 - 02/02/24	ug/m3	0.40	1.15	<1.15	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

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479-152 (BML)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

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Sample Number	249854-1
Sampled Date	Feb 01, 2024
Sample Description	Air Quality
Location	สถานีควบคุมคุณภาพสิ่งแวดล้อมและโรงงาน(บางปะกง)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced	Feb 05, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	01/02/24 - 02/02/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	01/02/24 - 02/02/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	01/02/24 - 02/02/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	01/02/24 - 02/02/24	ug/m3	0.20	0.66	11.82	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	01/02/24 - 02/02/24	ug/m3	0.50	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	01/02/24 - 02/02/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	01/02/24 - 02/02/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	01/02/24 - 02/02/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	01/02/24 - 02/02/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	01/02/24 - 02/02/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	01/02/24 - 02/02/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

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479-152 (BML)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

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Sample Number	249854-1
Sampled Date	Feb 01, 2024
Sample Description	Air Quality
Location	สถานีควบคุมคุณภาพสิ่งแวดล้อมและโรงงาน(บางปะกง)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced	Feb 05, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	01/02/24 - 02/02/24	ug/m3	0.50	1.48	<1.48	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	01/02/24 - 02/02/24	ug/m3	0.50	1.19	<1.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	01/02/24 - 02/02/24	ug/m3	0.30	0.86	2.62	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	01/02/24 - 02/02/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	01/02/24 - 02/02/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	01/02/24 - 02/02/24	ug/m3	0.60	1.88	<1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	01/02/24 - 02/02/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	01/02/24 - 02/02/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	01/02/24 - 02/02/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	01/02/24 - 02/02/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

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479-152 (BML)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

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Sample Number	249854-1
Sampled Date	Feb 01, 2024
Sample Description	Air Quality
Location	สถานีควบคุมคุณภาพสิ่งแวดล้อมและโรงงาน(บางปะกง)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced	Feb 05, 2024
Condition of Sample	Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	01/02/24 - 02/02/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :
NEB : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Nontachai Uppathamp

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

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

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Sample Number : 249854-2
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	01/02/24 - 02/02/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	01/02/24 - 02/02/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	01/02/24 - 02/02/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	01/02/24 - 02/02/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	01/02/24 - 02/02/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	01/02/24 - 02/02/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	01/02/24 - 02/02/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	01/02/24 - 02/02/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	01/02/24 - 02/02/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Chanchon

Dej Chanchon
Senior Manager

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479-1231 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

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Sample Number : 249854-2
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	01/02/24 - 02/02/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	01/02/24 - 02/02/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	01/02/24 - 02/02/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	01/02/24 - 02/02/24	ug/m3	0.04	0.11	<0.11	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	01/02/24 - 02/02/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	01/02/24 - 02/02/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	01/02/24 - 02/02/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	01/02/24 - 02/02/24	ug/m3	0.50	1.52	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	01/02/24 - 02/02/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	01/02/24 - 02/02/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Chanchon

Dej Chanchon
Senior Manager

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479-1231 (ENGL)



Analysis / Test Report

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18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Page 11 of 24

Sample Number : 249854-2
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanone	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	01/02/24 - 02/02/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	01/02/24 - 02/02/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	01/02/24 - 02/02/24	ug/m3	0.05	0.18	2.27	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	01/02/24 - 02/02/24	ug/m3	0.08	0.24	5.13	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	01/02/24 - 02/02/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	01/02/24 - 02/02/24	ug/m3	0.08	0.23	Not Detected	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	01/02/24 - 02/02/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	01/02/24 - 02/02/24	ug/m3	0.05	0.16	0.26	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	01/02/24 - 02/02/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

D. Chanchon

Dej Chanchon
Senior Manager

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479-1231 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Page 12 of 24

Sample Number : 249854-2
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	01/02/24 - 02/02/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	01/02/24 - 02/02/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	01/02/24 - 02/02/24	ug/m3	0.06	0.19	<0.19	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	01/02/24 - 02/02/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	01/02/24 - 02/02/24	ug/m3	0.05	0.16	Not Detected	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	01/02/24 - 02/02/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	01/02/24 - 02/02/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	01/02/24 - 02/02/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	01/02/24 - 02/02/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	01/02/24 - 02/02/24	ug/m3	0.30	1.03	1.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Chanchon

Dej Chanchon
Senior Manager

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479-1231 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 249854

Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Sample Number : 249854-2
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : พัทยาสุข(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

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Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	01/02/24 - 02/02/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	01/02/24 - 02/02/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	01/02/24 - 02/02/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	01/02/24 - 02/02/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	01/02/24 - 02/02/24	ug/m3	0.80	2.47	2.57	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	01/02/24 - 02/02/24	ug/m3	0.06	0.17	0.35	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	01/02/24 - 02/02/24	ug/m3	0.30	0.94	4.56	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	01/02/24 - 02/02/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	01/02/24 - 02/02/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	01/02/24 - 02/02/24	ug/m3	0.40	1.15	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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479-102 (PMS)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 249854

Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Sample Number : 249854-2
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : พัทยาสุข(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

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Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	01/02/24 - 02/02/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	01/02/24 - 02/02/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	01/02/24 - 02/02/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	01/02/24 - 02/02/24	ug/m3	0.20	0.66	5.48	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	01/02/24 - 02/02/24	ug/m3	0.50	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	01/02/24 - 02/02/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	01/02/24 - 02/02/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	01/02/24 - 02/02/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	01/02/24 - 02/02/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	01/02/24 - 02/02/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	01/02/24 - 02/02/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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479-102 (PMS)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 249854

Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Sample Number : 249854-2
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : พัทยาสุข(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

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Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	01/02/24 - 02/02/24	ug/m3	0.50	1.48	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	01/02/24 - 02/02/24	ug/m3	0.50	1.19	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	01/02/24 - 02/02/24	ug/m3	0.30	0.86	<0.86	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	01/02/24 - 02/02/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	01/02/24 - 02/02/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	01/02/24 - 02/02/24	ug/m3	0.60	1.88	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	01/02/24 - 02/02/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	01/02/24 - 02/02/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	01/02/24 - 02/02/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	01/02/24 - 02/02/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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479-102 (PMS)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 249854

Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Sample Number : 249854-2
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : พัทยาสุข(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Page 16 of 24

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	01/02/24 - 02/02/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).

Sampled By : Nontchai Uppathamp

Remark :

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

Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Page 17 of 24

Sample Number 249854-3
Sample Date Feb 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙ (GPS 47P 0730826, 1407360)
Date Analysis Commenced Feb 05, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	01/02/24 - 02/02/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	01/02/24 - 02/02/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	01/02/24 - 02/02/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	01/02/24 - 02/02/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	01/02/24 - 02/02/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	01/02/24 - 02/02/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	01/02/24 - 02/02/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	01/02/24 - 02/02/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	01/02/24 - 02/02/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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47P-012 ENGL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Page 18 of 24

Sample Number 249854-3
Sample Date Feb 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙ (GPS 47P 0730826, 1407360)
Date Analysis Commenced Feb 05, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	01/02/24 - 02/02/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	01/02/24 - 02/02/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	01/02/24 - 02/02/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	01/02/24 - 02/02/24	ug/m3	0.04	0.11	0.13	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	01/02/24 - 02/02/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	01/02/24 - 02/02/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	01/02/24 - 02/02/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	01/02/24 - 02/02/24	ug/m3	0.50	1.52	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	01/02/24 - 02/02/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	01/02/24 - 02/02/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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47P-012 ENGL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

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Sample Number 249854-3
Sample Date Feb 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙ (GPS 47P 0730826, 1407360)
Date Analysis Commenced Feb 05, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentane	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	01/02/24 - 02/02/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	01/02/24 - 02/02/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentane	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	01/02/24 - 02/02/24	ug/m3	0.05	0.18	3.17	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	01/02/24 - 02/02/24	ug/m3	0.08	0.24	6.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	01/02/24 - 02/02/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	01/02/24 - 02/02/24	ug/m3	0.08	0.23	Not Detected	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	01/02/24 - 02/02/24	ug/m3	0.07	0.22	0.69	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	01/02/24 - 02/02/24	ug/m3	0.05	0.16	0.58	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	01/02/24 - 02/02/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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47P-012 ENGL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

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Sample Number 249854-3
Sample Date Feb 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙ (GPS 47P 0730826, 1407360)
Date Analysis Commenced Feb 05, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	01/02/24 - 02/02/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	01/02/24 - 02/02/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	01/02/24 - 02/02/24	ug/m3	0.06	0.19	<0.19	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	01/02/24 - 02/02/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	01/02/24 - 02/02/24	ug/m3	0.05	0.16	Not Detected	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	01/02/24 - 02/02/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	01/02/24 - 02/02/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	01/02/24 - 02/02/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	01/02/24 - 02/02/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	01/02/24 - 02/02/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	01/02/24 - 02/02/24	ug/m3	0.30	1.03	1.94	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

D. Changchon

Dej Changchon
Senior Manager

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47P-012 ENGL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Page 21 of 24

Sample Number : 249854-3
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : เซวรูต๊ะ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	01/02/24 - 02/02/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	01/02/24 - 02/02/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	01/02/24 - 02/02/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	01/02/24 - 02/02/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	01/02/24 - 02/02/24	ug/m3	0.80	2.47	<2.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	01/02/24 - 02/02/24	ug/m3	0.06	0.17	0.56	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	01/02/24 - 02/02/24	ug/m3	0.30	0.94	4.75	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	01/02/24 - 02/02/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	01/02/24 - 02/02/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutane	01/02/24 - 02/02/24	ug/m3	0.40	1.15	<1.15	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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479-101 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Page 22 of 24

Sample Number : 249854-3
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : เซวรูต๊ะ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	01/02/24 - 02/02/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	01/02/24 - 02/02/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	01/02/24 - 02/02/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	01/02/24 - 02/02/24	ug/m3	0.20	0.66	18.40	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	01/02/24 - 02/02/24	ug/m3	0.50	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	01/02/24 - 02/02/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	01/02/24 - 02/02/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	01/02/24 - 02/02/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	01/02/24 - 02/02/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	01/02/24 - 02/02/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	01/02/24 - 02/02/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Page 23 of 24

Sample Number : 249854-3
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : เซวรูต๊ะ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	01/02/24 - 02/02/24	ug/m3	0.50	1.48	<1.48	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	01/02/24 - 02/02/24	ug/m3	0.50	1.19	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	01/02/24 - 02/02/24	ug/m3	0.30	0.86	2.68	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	01/02/24 - 02/02/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	01/02/24 - 02/02/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	01/02/24 - 02/02/24	ug/m3	0.60	1.88	<1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	01/02/24 - 02/02/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	01/02/24 - 02/02/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	01/02/24 - 02/02/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	01/02/24 - 02/02/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	01/02/24 - 02/02/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 249854
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Report Number : 2894722-1

Page 24 of 24

Sample Number : 249854-3
Sampled Date : Feb 01, 2024
Sample Description : Air Quality
Location : เซวรูต๊ะ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Feb 05, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	01/02/24 - 02/02/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :

NES : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Nontachai Uppathamp

Remark :

LOD : Limit of Detection
"c" : Lower than LOQ (Limit of Quantitation) / LOE (Limit of Reporting)

Approved by

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Senior Manager

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422819
Date Received :Mar 08, 2024
Date Reported :Mar 14, 2024
Report Number :2921148-1 C1

Page 1 of 2

Sample Number : 2422819-4
Parameter : Wind Speed / Wind Direction
Location : อำเภอเมืองระยอง (อำเภอเมืองระยอง) (A1) (GPS 47P 0730907, 1405264)
Sampling Date : Mar 04 - Mar 05, 2024
Sampling by : Saknarin Jaraskay

Time	Mar 04 - Mar 05, 2024																			
	WS (m/s)	WD (deg)																		
11:00 AM - 12:00 PM	1.1	197.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	2.4	248.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	2.5	265.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	2.2	241.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	3.1	242.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.4	179.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	2.3	154.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	1.7	103.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.6	227.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.6	236.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	1.0	276.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	1.9	260.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	2.0	255.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	3.5	194.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.5	252.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	2.3	249.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.3	236.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.7	246.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.6	171.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.4	221.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	1.0	188.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.5	253.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.9	248.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.8	221.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuht Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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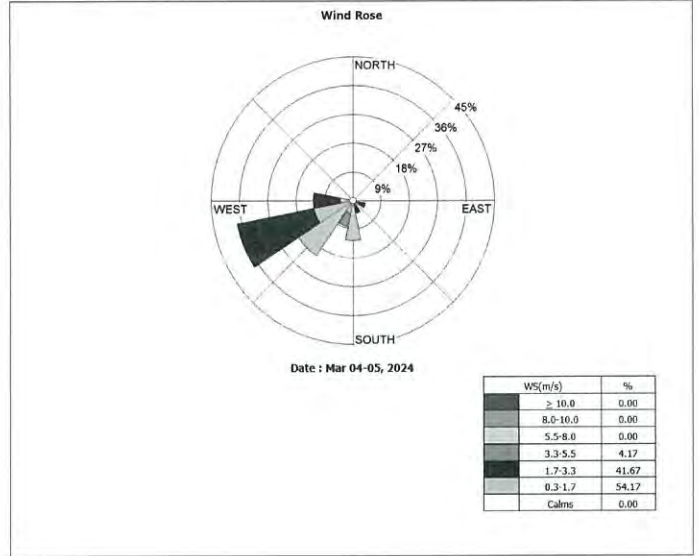


Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422819
Date Received :Mar 08, 2024
Date Reported :Mar 14, 2024
Report Number :2921148-1 C1

Page 2 of 2



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Sarayuht Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422823
Date Received :Mar 07, 2024
Date Reported :Mar 14, 2024
Report Number :2921153-1

Page 1 of 2

Sample Number : 2422823-1
Parameter : Wind Speed / Wind Direction
Location : อำเภอเมืองระยอง (อำเภอเมืองระยอง) (A2) (GPS 47P 0729828, 1403318)
Sampling Date : Mar 04 - Mar 05, 2024
Sampling by : Saknarin Jaraskay

Time	Mar 04 - Mar 05, 2024																			
	WS (m/s)	WD (deg)																		
10:00 AM - 11:00 AM	0.5	209.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.5	209.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.9	208.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.4	227.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.5	155.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.5	236.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.5	231.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.9	252.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.6	240.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	2.2	214.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.6	187.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.9	217.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	2.3	161.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.6	197.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	3.1	182.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.6	180.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	1.6	189.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	1.9	143.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	1.4	107.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.5	175.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.1	245.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.4	136.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.6	215.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.3	235.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuht Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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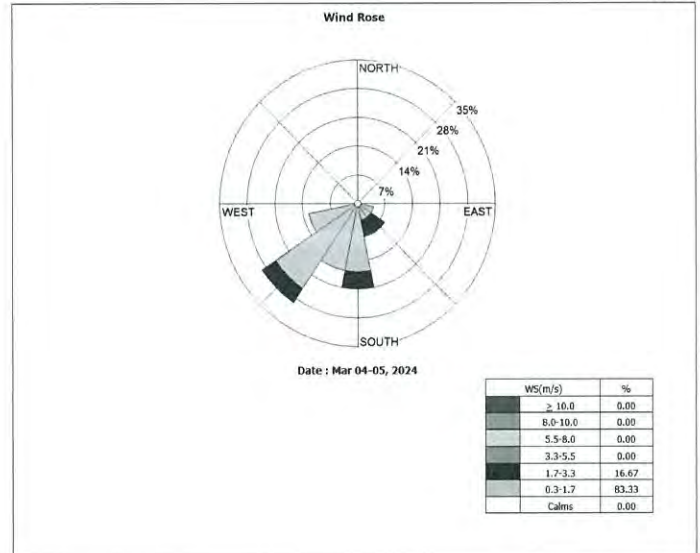


Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422823
Date Received :Mar 07, 2024
Date Reported :Mar 14, 2024
Report Number :2921153-1

Page 2 of 2



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Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2422823

Date Received : Mar 07, 2024

Date Reported : Mar 14, 2024

Report Number : 2921153-1

Page 1 of 2

Sample Number : 2422823-2
Parameter : Wind Speed / Wind Direction
Location : 94.171816 (A3) (GPS 47P 0730826, 1407360)
Sampling Date : Mar 04 - Mar 05, 2024
Sampling by : Saknani Jarasak

Time	Mar 04 - Mar 05, 2024																			
	WS (m/s)	WD (deg)																		
12:00 PM - 01:00 PM	1.2	119.0	ESE																	
01:00 PM - 02:00 PM	0.1																			
02:00 PM - 03:00 PM	2.4	113.0	ESE																	
03:00 PM - 04:00 PM	0.5	146.0	SE																	
04:00 PM - 05:00 PM	2.9	178.0	S																	
05:00 PM - 06:00 PM	0.4	119.0	ESE																	
06:00 PM - 07:00 PM	0.5	121.0	ESE																	
07:00 PM - 08:00 PM	0.1																			
08:00 PM - 09:00 PM	1.3	179.0	S																	
09:00 PM - 10:00 PM	1.4	192.0	SSW																	
10:00 PM - 11:00 PM	1.3	156.0	SSE																	
11:00 PM - 12:00 AM	0.9	224.0	SW																	
12:00 AM - 01:00 AM	1.1	86.0	E																	
01:00 AM - 02:00 AM	0.0																			
02:00 AM - 03:00 AM	0.8	292.0	WNW																	
03:00 AM - 04:00 AM	0.0																			
04:00 AM - 05:00 AM	0.8	195.0	SSW																	
05:00 AM - 06:00 AM	0.3	111.0	ESE																	
06:00 AM - 07:00 AM	1.0	72.0	ENE																	
07:00 AM - 08:00 AM	1.9	138.0	SE																	
08:00 AM - 09:00 AM	2.3	223.0	SW																	
09:00 AM - 10:00 AM	1.4	209.0	SSW																	
10:00 AM - 11:00 AM	2.0	221.0	SW																	
11:00 AM - 12:00 PM	2.4	198.0	SSW																	

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

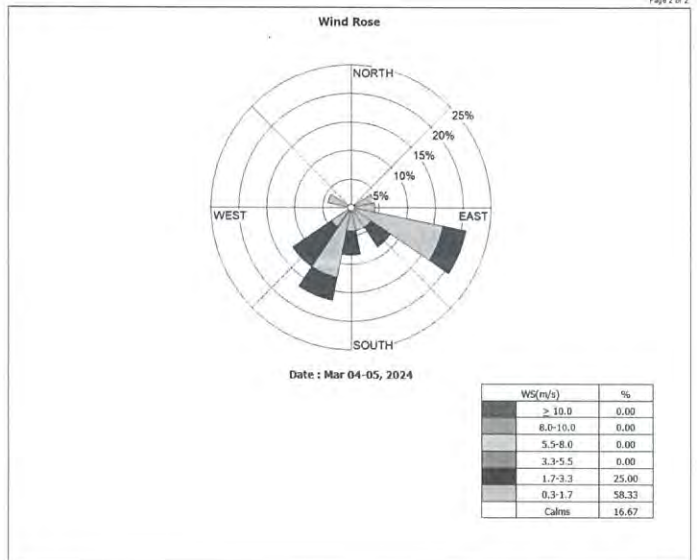
Lot ID: 2422823

Date Received : Mar 07, 2024

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Report Number : 2921153-1

Page 2 of 2



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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2422828

Date Received : Mar 05, 2024

Date Reported : Mar 12, 2024

Report Number : 2921154-1

Page 1 of 24

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	04/03/24 - 05/03/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	04/03/24 - 05/03/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compensium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	04/03/24 - 05/03/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	04/03/24 - 05/03/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,1-Dichloroethane	04/03/24 - 05/03/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,1-Dichloroethene	04/03/24 - 05/03/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	04/03/24 - 05/03/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,2-Dibromoethane	04/03/24 - 05/03/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compensium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	04/03/24 - 05/03/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong

Approved by

Chontichak

Chonticha Subongkroh

Scientist (3)

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479-151 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2422828

Date Received : Mar 05, 2024

Date Reported : Mar 12, 2024

Report Number : 2921154-1

Page 2 of 24

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	04/03/24 - 05/03/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compensium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	04/03/24 - 05/03/24	ug/m3	0.08	0.23	<0.23	82	Based on US EPA Compensium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	04/03/24 - 05/03/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,3-Butadiene	04/03/24 - 05/03/24	ug/m3	0.04	0.11	0.88	5.3	Based on US EPA Compensium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	04/03/24 - 05/03/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	04/03/24 - 05/03/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compensium Method, TO-15	PCD	Rayong
1,4-Dioxane	04/03/24 - 05/03/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compensium Method, TO-15	PCD	Rayong
1-Butanol	04/03/24 - 05/03/24	ug/m3	0.50	1.52	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
1-Propanol	04/03/24 - 05/03/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong
2-Hexanone	04/03/24 - 05/03/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compensium Method, TO-15	-	Rayong

Approved by

Chontichak

Chonticha Subongkroh

Scientist (3)

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479-151 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 3 of 24

Sample Number	2422828-1								
Sampled Date	Mar 04, 2024								
Sample Description	Air Quality								
Location	สำนักงานคณะกรรมการกฤษฎีกาและศูนย์วิจัยและพัฒนาการป้องกันและจัดการภัยพิบัติ(กฤษฎีกา)(A1)GPS 47P 0730907, 1405264								
Date Analysis Commenced	Mar 06, 2024								
Condition of Sample	Drawn into one 6-L Canister								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOB)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanone	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	04/03/24 - 05/03/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	04/03/24 - 05/03/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	04/03/24 - 05/03/24	ug/m3	0.05	0.18	2.56	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	04/03/24 - 05/03/24	ug/m3	0.08	0.24	6.13	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	04/03/24 - 05/03/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	04/03/24 - 05/03/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	04/03/24 - 05/03/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	04/03/24 - 05/03/24	ug/m3	0.05	0.16	0.77	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	04/03/24 - 05/03/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

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Chontichak
Chonticha Subongkroh
Scientist (3)

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479-101 (ENGL)



Analysis / Test Report

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21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 4 of 24

Sample Number	2422828-1									
Sampled Date	Mar 04, 2024									
Sample Description	Air Quality									
Location	สำนักงานคณะกรรมการกฤษฎีกาและศูนย์วิจัยและพัฒนาการป้องกันและจัดการภัยพิบัติ(กฤษฎีกา)(A1)GPS 47P 0730907, 1405264)									
Date Analysis Commenced	Mar 06, 2024									
Condition of Sample	Drawn into one 6-L Canister									
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location	
Air Testing										
Bromodichloromethane	04/03/24 - 05/03/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Bromoform	04/03/24 - 05/03/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Bromomethane	04/03/24 - 05/03/24	ug/m3	0.06	0.19	<0.19	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong	
Butanal	04/03/24 - 05/03/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Carbon Disulfide	04/03/24 - 05/03/24	ug/m3	0.05	0.16	Not Detected	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong	
Carbon Tetrachloride	04/03/24 - 05/03/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong	
Chlorobenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Chlorodifluoromethane (HCFC-22)	04/03/24 - 05/03/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Chloroethane	04/03/24 - 05/03/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Chloroform	04/03/24 - 05/03/24	ug/m3	0.08	0.24	0.29	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong	
Chloromethane	04/03/24 - 05/03/24	ug/m3	0.30	1.03	1.53	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	

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Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 5 of 24

Sample Number	2422828-1									
Sampled Date	Mar 04, 2024									
Sample Description	Air Quality									
Location	สำนักงานคณะกรรมการกฤษฎีกาและศูนย์วิจัยและพัฒนาการป้องกันและจัดการภัยพิบัติ(กฤษฎีกา)(A1)GPS 47P 0730907, 1405264									
Date Analysis Commenced	Mar 06, 2024									
Condition of Sample	Drawn into one 6-L Canister									
Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location	
Air Testing										
cis-1,2-Dichloroethene	04/03/24 - 05/03/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
cis-1,3-Dichloropropene	04/03/24 - 05/03/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Cyclohexane	04/03/24 - 05/03/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Cyclopentane	04/03/24 - 05/03/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Dichlorodifluoromethane (CFC-112)	04/03/24 - 05/03/24	ug/m3	0.80	2.47	2.87	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Dichloromethane	04/03/24 - 05/03/24	ug/m3	0.06	0.17	0.76	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong	
Ethanol	04/03/24 - 05/03/24	ug/m3	0.30	0.94	1.32	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Ethyl Benzene	04/03/24 - 05/03/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Hexanal	04/03/24 - 05/03/24	ug/m3	0.60	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Hexane	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Isobutene	04/03/24 - 05/03/24	ug/m3	0.40	1.15	<1.15	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	

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Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 6 of 24

Sample Number	2422828-1								
Sampled Date	Mar 04, 2024								
Sample Description	Air Quality								
Location	สำนักงานคณะกรรมการกฤษฎีกาและศูนย์วิจัยและพัฒนาการป้องกันและจัดการภัยพิบัติ(กฤษฎีกา)(A1)GPS 47P 0730907, 1405264								
Date Analysis Commenced	Mar 06, 2024								
Condition of Sample	Drawn into one 6-L Canister								
Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	04/03/24 - 05/03/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	04/03/24 - 05/03/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	04/03/24 - 05/03/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	04/03/24 - 05/03/24	ug/m3	0.20	0.66	28.41	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	04/03/24 - 05/03/24	ug/m3	0.50	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	04/03/24 - 05/03/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	04/03/24 - 05/03/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	04/03/24 - 05/03/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	04/03/24 - 05/03/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	04/03/24 - 05/03/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	04/03/24 - 05/03/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-101 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 7 of 24

Sample Number : 2422828-1
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : ตำบลบ้านดอน อำเภอเมืองระยอง จังหวัดระยอง (บ้านนาหมู่)(A1) GPS 47P 0730907, 1405264
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	04/03/24 - 05/03/24	ug/m3	0.50	1.48	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	04/03/24 - 05/03/24	ug/m3	0.50	1.19	<1.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	04/03/24 - 05/03/24	ug/m3	0.30	0.86	4.13	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	04/03/24 - 05/03/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	04/03/24 - 05/03/24	ug/m3	0.11	0.34	<0.34	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	04/03/24 - 05/03/24	ug/m3	0.60	1.88	2.94	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	04/03/24 - 05/03/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	04/03/24 - 05/03/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	04/03/24 - 05/03/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	04/03/24 - 05/03/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479 (SU) (M)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 8 of 24

Sample Number : 2422828-1
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : ตำบลบ้านดอน อำเภอเมืองระยอง จังหวัดระยอง (บ้านนาหมู่)(A1) GPS 47P 0730907, 1405264
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	04/03/24 - 05/03/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :
NEB : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Jittakorn Srivasa

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

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 9 of 24

Sample Number : 2422828-2
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : เทศบาลเมืองระยอง (A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	04/03/24 - 05/03/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	04/03/24 - 05/03/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	04/03/24 - 05/03/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	04/03/24 - 05/03/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	04/03/24 - 05/03/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	04/03/24 - 05/03/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	04/03/24 - 05/03/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	04/03/24 - 05/03/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	04/03/24 - 05/03/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

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Sample Number : 2422828-2
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : เทศบาลเมืองระยอง (A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	04/03/24 - 05/03/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	04/03/24 - 05/03/24	ug/m3	0.08	0.23	<0.23	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	04/03/24 - 05/03/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	04/03/24 - 05/03/24	ug/m3	0.04	0.11	Not Detected	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	04/03/24 - 05/03/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	04/03/24 - 05/03/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	04/03/24 - 05/03/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	04/03/24 - 05/03/24	ug/m3	0.50	1.52	2.85	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	04/03/24 - 05/03/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	04/03/24 - 05/03/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 11 of 24

Sample Number : 2422828-2
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : เซ็นทรัลฮิล(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentaneone	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	04/03/24 - 05/03/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	04/03/24 - 05/03/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	04/03/24 - 05/03/24	ug/m3	0.05	0.18	2.78	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	04/03/24 - 05/03/24	ug/m3	0.08	0.24	5.32	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	04/03/24 - 05/03/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	04/03/24 - 05/03/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	04/03/24 - 05/03/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	04/03/24 - 05/03/24	ug/m3	0.05	0.16	0.32	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	04/03/24 - 05/03/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 12 of 24

Sample Number : 2422828-2
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : เซ็นทรัลฮิล(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	04/03/24 - 05/03/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	04/03/24 - 05/03/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	04/03/24 - 05/03/24	ug/m3	0.06	0.19	<0.19	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	04/03/24 - 05/03/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	04/03/24 - 05/03/24	ug/m3	0.05	0.16	Not Detected	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	04/03/24 - 05/03/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	04/03/24 - 05/03/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	04/03/24 - 05/03/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	04/03/24 - 05/03/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	04/03/24 - 05/03/24	ug/m3	0.30	1.03	1.53	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-1021 EMAIL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 13 of 24

Sample Number : 2422828-2
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : เซ็นทรัลฮิล(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

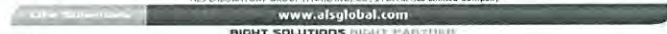
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	04/03/24 - 05/03/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	04/03/24 - 05/03/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	04/03/24 - 05/03/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	04/03/24 - 05/03/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	04/03/24 - 05/03/24	ug/m3	0.80	2.47	2.57	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	04/03/24 - 05/03/24	ug/m3	0.06	0.17	0.49	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	04/03/24 - 05/03/24	ug/m3	0.30	0.94	3.54	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	04/03/24 - 05/03/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	04/03/24 - 05/03/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	04/03/24 - 05/03/24	ug/m3	0.40	1.15	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 14 of 24

Sample Number : 2422828-2
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : เซ็นทรัลฮิล(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	04/03/24 - 05/03/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	04/03/24 - 05/03/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	04/03/24 - 05/03/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	04/03/24 - 05/03/24	ug/m3	0.20	0.66	10.12	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	04/03/24 - 05/03/24	ug/m3	0.50	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	04/03/24 - 05/03/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	04/03/24 - 05/03/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	04/03/24 - 05/03/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	04/03/24 - 05/03/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	04/03/24 - 05/03/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	04/03/24 - 05/03/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



479-1021 EMAIL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 15 of 24

Sample Number : 2422828-2
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : พัชราวาส(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	04/03/24 - 05/03/24	ug/m3	0.50	1.48	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	04/03/24 - 05/03/24	ug/m3	0.50	1.19	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	04/03/24 - 05/03/24	ug/m3	0.30	0.86	<0.86	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	04/03/24 - 05/03/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	04/03/24 - 05/03/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	04/03/24 - 05/03/24	ug/m3	0.60	1.88	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	04/03/24 - 05/03/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	04/03/24 - 05/03/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	04/03/24 - 05/03/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	04/03/24 - 05/03/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479 (SU) (MAL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

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Sample Number : 2422828-2
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : พัชราวาส(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	04/03/24 - 05/03/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Jitakorn Sriwasa

Remark :

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

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 17 of 24

Sample Number : 2422828-3
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : พัชราวาส(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	04/03/24 - 05/03/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	04/03/24 - 05/03/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	04/03/24 - 05/03/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	04/03/24 - 05/03/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	04/03/24 - 05/03/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	04/03/24 - 05/03/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	04/03/24 - 05/03/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	04/03/24 - 05/03/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	04/03/24 - 05/03/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

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Sample Number : 2422828-3
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : พัชราวาส(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	04/03/24 - 05/03/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	04/03/24 - 05/03/24	ug/m3	0.08	0.23	<0.23	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	04/03/24 - 05/03/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	04/03/24 - 05/03/24	ug/m3	0.04	0.11	<0.11	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	04/03/24 - 05/03/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	04/03/24 - 05/03/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	04/03/24 - 05/03/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	04/03/24 - 05/03/24	ug/m3	0.50	1.52	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	04/03/24 - 05/03/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	04/03/24 - 05/03/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479 (SU) (MAL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 19 of 24

Sample Number : 2422828-3
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanol	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	04/03/24 - 05/03/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	04/03/24 - 05/03/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	04/03/24 - 05/03/24	ug/m3	0.05	0.18	1.77	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	04/03/24 - 05/03/24	ug/m3	0.08	0.24	6.56	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	04/03/24 - 05/03/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	04/03/24 - 05/03/24	ug/m3	0.08	0.23	Not Detected	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	04/03/24 - 05/03/24	ug/m3	0.07	0.22	1.30	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	04/03/24 - 05/03/24	ug/m3	0.05	0.16	0.45	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	04/03/24 - 05/03/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-102 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 20 of 24

Sample Number : 2422828-3
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	04/03/24 - 05/03/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	04/03/24 - 05/03/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	04/03/24 - 05/03/24	ug/m3	0.06	0.19	0.39	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	04/03/24 - 05/03/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	04/03/24 - 05/03/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	04/03/24 - 05/03/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	04/03/24 - 05/03/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	04/03/24 - 05/03/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	04/03/24 - 05/03/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	04/03/24 - 05/03/24	ug/m3	0.08	0.24	0.29	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	04/03/24 - 05/03/24	ug/m3	0.30	1.03	1.40	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-102 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 21 of 24

Sample Number : 2422828-3
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	04/03/24 - 05/03/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	04/03/24 - 05/03/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	04/03/24 - 05/03/24	ug/m3	0.60	1.72	1.93	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	04/03/24 - 05/03/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	04/03/24 - 05/03/24	ug/m3	0.80	2.47	2.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	04/03/24 - 05/03/24	ug/m3	0.06	0.17	0.56	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	04/03/24 - 05/03/24	ug/m3	0.30	0.94	1.21	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	04/03/24 - 05/03/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	04/03/24 - 05/03/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	04/03/24 - 05/03/24	ug/m3	0.40	1.15	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-102 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

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Sample Number : 2422828-3
Sampled Date : Mar 04, 2024
Sample Description : Air Quality
Location : ๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	04/03/24 - 05/03/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	04/03/24 - 05/03/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	04/03/24 - 05/03/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	04/03/24 - 05/03/24	ug/m3	0.20	0.66	10.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	04/03/24 - 05/03/24	ug/m3	0.50	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	04/03/24 - 05/03/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	04/03/24 - 05/03/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	04/03/24 - 05/03/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	04/03/24 - 05/03/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m-Xylene	04/03/24 - 05/03/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	04/03/24 - 05/03/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-102 (ENGL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 23 of 24

Sample Number : 2422828-3
Sample Date : Mar 04, 2024
Sample Description : Air Quality
Location : Seunusie(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	04/03/24 - 05/03/24	ug/m3	0.50	1.48	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	04/03/24 - 05/03/24	ug/m3	0.50	1.19	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	04/03/24 - 05/03/24	ug/m3	0.30	0.86	1.07	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	04/03/24 - 05/03/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	04/03/24 - 05/03/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	04/03/24 - 05/03/24	ug/m3	0.60	1.88	<1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	04/03/24 - 05/03/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	04/03/24 - 05/03/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	04/03/24 - 05/03/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	04/03/24 - 05/03/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	04/03/24 - 05/03/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479-321 (BML)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434149
Date Received : Apr 02, 2024
Date Reported : Apr 08, 2024
Report Number : 2946683-1

Page 1 of 2

Sample Number : 2434149-1
Parameter : Wind Speed / Wind Direction
Location : บ้านนาบึงหนองปรือ/หนองปรือ/หนองปรือ (บ้านนาบึง) (A1) (GPS 47P 0730907, 1405264)
Sampling Date : Apr 01 - Apr 02, 2024
Sampling by : Peerapat Kakhm

Time	Apr 01 - Apr 02, 2024															
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	3.0	174.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	3.0	178.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	2.9	173.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	2.5	172.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	2.4	157.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	2.5	143.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	2.3	140.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	2.5	133.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	2.8	136.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	1.9	150.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	2.0	154.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	2.0	165.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	2.1	162.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	2.5	172.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	2.3	171.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	2.3	172.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	1.7	175.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	1.7	163.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.8	172.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	2.4	172.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	2.2	174.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.9	171.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	2.1	171.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	2.6	147.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

Approved by

Sarayu Thiratrant
Assistant General Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422828
Date Received : Mar 05, 2024
Date Reported : Mar 12, 2024
Report Number : 2921154-1

Page 24 of 24

Sample Number : 2422828-3
Sample Date : Mar 04, 2024
Sample Description : Air Quality
Location : Seunusie(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Mar 06, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	04/03/24 - 05/03/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :
NEB : Notification of National Environment Board, B.E. 2550 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Jittakorn Sriwasa

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

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479-321 (BML)

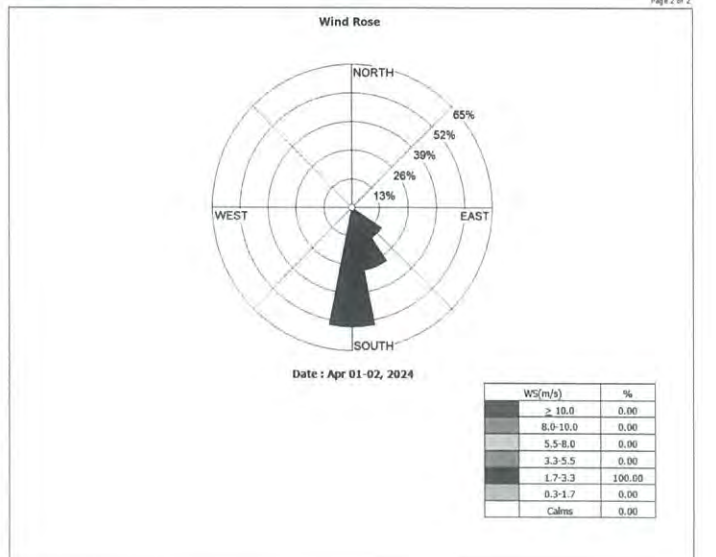


Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434149
Date Received : Apr 02, 2024
Date Reported : Apr 08, 2024
Report Number : 2946683-1

Page 2 of 2



Approved by

Sarayu Thiratrant
Assistant General Manager

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P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434149
Date Received :Apr 02, 2024
Date Reported :Apr 08, 2024
Report Number :2946683-1

Page 1 of 2

[illegible]

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jittranont
Assistant General Manager

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434149
Date Received :Apr 02, 2024
Date Reported :Apr 08, 2024
Report Number :2946683-1


Page 1 of 2

[illegible]

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jitranont
Assistant General Manager

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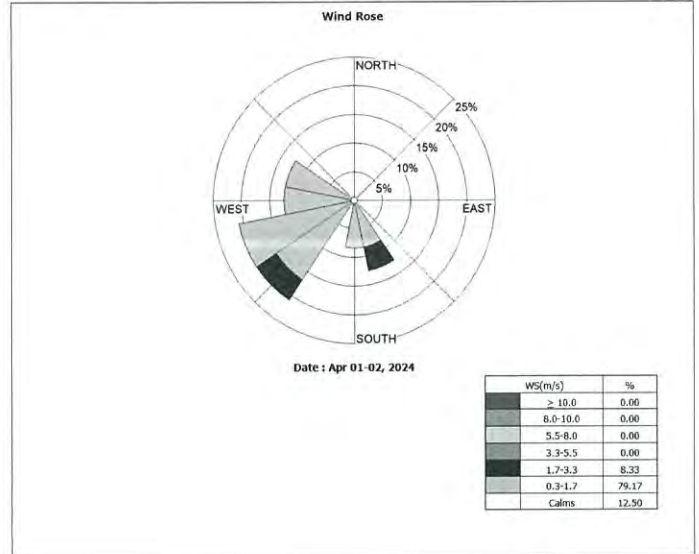
Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE


Lot ID: 2434149
Date Received :Apr 02, 2024
Date Reported :Apr 08, 2024
Report Number :2946683-1

Page 2 of 2



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Sarayuth Jittranont
Assistant General Manager

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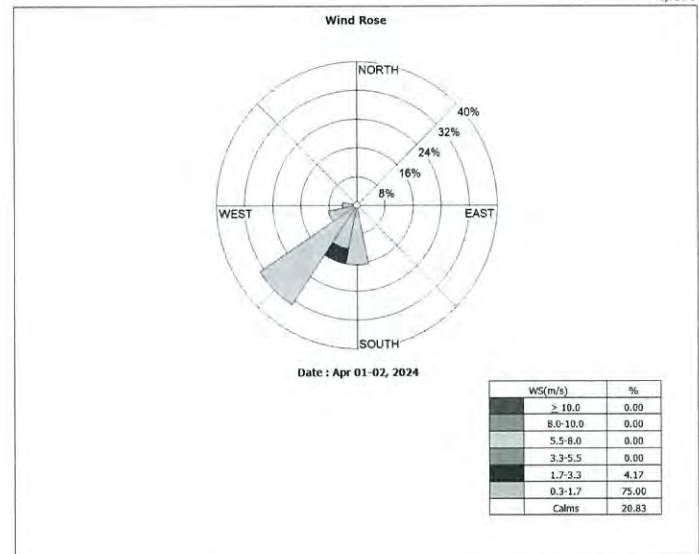
Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :
Project Name : Monitoring
Project Location : WHA E1


Lot ID: 2434149
Date Received :Apr 02, 2024
Date Reported :Apr 08, 2024
Report Number :2946683-1

Page 2 of 2



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Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

Page 1 of 24

Sample Number 2434150-1
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ตำบลท่าบ่อหลวง อำเภอเมือง จังหวัดระยอง (ถนนพหลโยธิน)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	01/04/24 - 02/04/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	01/04/24 - 02/04/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	01/04/24 - 02/04/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	01/04/24 - 02/04/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	01/04/24 - 02/04/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	01/04/24 - 02/04/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	01/04/24 - 02/04/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	01/04/24 - 02/04/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	01/04/24 - 02/04/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak

Chonticha Subongkach
Scientist (3)

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479-321 (BAK)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

Page 2 of 24

Sample Number 2434150-1
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ตำบลท่าบ่อหลวง อำเภอเมือง จังหวัดระยอง (ถนนพหลโยธิน)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	01/04/24 - 02/04/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	01/04/24 - 02/04/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	01/04/24 - 02/04/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	01/04/24 - 02/04/24	ug/m3	0.04	0.11	0.53	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	01/04/24 - 02/04/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	01/04/24 - 02/04/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	01/04/24 - 02/04/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	01/04/24 - 02/04/24	ug/m3	0.50	1.52	<1.52	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	01/04/24 - 02/04/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	01/04/24 - 02/04/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak

Chonticha Subongkach
Scientist (3)

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479-321 (BAK)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-1
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ตำบลท่าบ่อหลวง อำเภอเมือง จังหวัดระยอง (ถนนพหลโยธิน)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanol	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	01/04/24 - 02/04/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	01/04/24 - 02/04/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	01/04/24 - 02/04/24	ug/m3	0.05	0.18	1.66	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	01/04/24 - 02/04/24	ug/m3	0.08	0.24	13.73	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	01/04/24 - 02/04/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	01/04/24 - 02/04/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	01/04/24 - 02/04/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	01/04/24 - 02/04/24	ug/m3	0.05	0.16	0.89	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	01/04/24 - 02/04/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Chontichak

Chonticha Subongkach
Scientist (3)

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479-321 (BAK)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-1
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ตำบลท่าบ่อหลวง อำเภอเมือง จังหวัดระยอง (ถนนพหลโยธิน)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	01/04/24 - 02/04/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	01/04/24 - 02/04/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	01/04/24 - 02/04/24	ug/m3	0.06	0.19	<0.19	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	01/04/24 - 02/04/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	01/04/24 - 02/04/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	01/04/24 - 02/04/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	01/04/24 - 02/04/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	01/04/24 - 02/04/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	01/04/24 - 02/04/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	01/04/24 - 02/04/24	ug/m3	0.30	1.03	1.94	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak

Chonticha Subongkach
Scientist (3)

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479-321 (BAK)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-1
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ตำบลนาบอนและพื้นที่รอบนอก(นาบอน) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	01/04/24 - 02/04/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	01/04/24 - 02/04/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	01/04/24 - 02/04/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	01/04/24 - 02/04/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	01/04/24 - 02/04/24	ug/m3	0.80	2.47	2.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	01/04/24 - 02/04/24	ug/m3	0.06	0.17	3.20	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	01/04/24 - 02/04/24	ug/m3	0.30	0.94	2.37	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	01/04/24 - 02/04/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	01/04/24 - 02/04/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	01/04/24 - 02/04/24	ug/m3	0.40	1.15	3.08	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-1
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ตำบลนาบอนและพื้นที่รอบนอก(นาบอน) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	01/04/24 - 02/04/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	01/04/24 - 02/04/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	01/04/24 - 02/04/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	01/04/24 - 02/04/24	ug/m3	0.20	0.66	18.69	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	01/04/24 - 02/04/24	ug/m3	0.50	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	01/04/24 - 02/04/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	01/04/24 - 02/04/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	01/04/24 - 02/04/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	01/04/24 - 02/04/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	01/04/24 - 02/04/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentalan	01/04/24 - 02/04/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

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18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-1
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ตำบลนาบอนและพื้นที่รอบนอก(นาบอน) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	01/04/24 - 02/04/24	ug/m3	0.50	1.48	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	01/04/24 - 02/04/24	ug/m3	0.50	1.19	<1.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	01/04/24 - 02/04/24	ug/m3	0.30	0.86	4.37	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	01/04/24 - 02/04/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	01/04/24 - 02/04/24	ug/m3	0.11	0.34	<0.34	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	01/04/24 - 02/04/24	ug/m3	0.60	1.88	2.94	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	01/04/24 - 02/04/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	01/04/24 - 02/04/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	01/04/24 - 02/04/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	01/04/24 - 02/04/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-1
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ตำบลนาบอนและพื้นที่รอบนอก(นาบอน) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	01/04/24 - 02/04/24	ug/m3	0.04	0.13	<0.13	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27,

B.E. 2552 (2009).

Sampled By : Peerapat Kahkam

Remark :

LOD : Limit of Detection

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

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number : 2434150-2
Sampled Date : Apr 01, 2024
Sample Description : Air Quality
Location : เซเว่นฮิลล์(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Apr 03, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	01/04/24 - 02/04/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	01/04/24 - 02/04/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	01/04/24 - 02/04/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	01/04/24 - 02/04/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	01/04/24 - 02/04/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	01/04/24 - 02/04/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	01/04/24 - 02/04/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.46	<2.46	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	01/04/24 - 02/04/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	01/04/24 - 02/04/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479-102 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number : 2434150-2
Sampled Date : Apr 01, 2024
Sample Description : Air Quality
Location : เซเว่นฮิลล์(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Apr 03, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	01/04/24 - 02/04/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	01/04/24 - 02/04/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	01/04/24 - 02/04/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	01/04/24 - 02/04/24	ug/m3	0.04	0.11	<0.11	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	01/04/24 - 02/04/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	01/04/24 - 02/04/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	01/04/24 - 02/04/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	01/04/24 - 02/04/24	ug/m3	0.50	1.52	<1.52	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	01/04/24 - 02/04/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	01/04/24 - 02/04/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479-102 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number : 2434150-2
Sampled Date : Apr 01, 2024
Sample Description : Air Quality
Location : เซเว่นฮิลล์(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Apr 03, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanol	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	01/04/24 - 02/04/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	01/04/24 - 02/04/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanol	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	01/04/24 - 02/04/24	ug/m3	0.05	0.18	1.12	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	01/04/24 - 02/04/24	ug/m3	0.08	0.24	7.89	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	01/04/24 - 02/04/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	01/04/24 - 02/04/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	01/04/24 - 02/04/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	01/04/24 - 02/04/24	ug/m3	0.05	0.16	0.19	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	01/04/24 - 02/04/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number : 2434150-2
Sampled Date : Apr 01, 2024
Sample Description : Air Quality
Location : เซเว่นฮิลล์(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : Apr 03, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	01/04/24 - 02/04/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	01/04/24 - 02/04/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	01/04/24 - 02/04/24	ug/m3	0.06	0.19	<0.19	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	01/04/24 - 02/04/24	ug/m3	0.49	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	01/04/24 - 02/04/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	01/04/24 - 02/04/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	01/04/24 - 02/04/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	01/04/24 - 02/04/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	01/04/24 - 02/04/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	01/04/24 - 02/04/24	ug/m3	0.30	1.03	1.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479-102 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-2
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	01/04/24 - 02/04/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	01/04/24 - 02/04/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	01/04/24 - 02/04/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	01/04/24 - 02/04/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	01/04/24 - 02/04/24	ug/m3	0.80	2.47	2.87	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	01/04/24 - 02/04/24	ug/m3	0.06	0.17	<0.17	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	01/04/24 - 02/04/24	ug/m3	0.30	0.94	3.32	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	01/04/24 - 02/04/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	01/04/24 - 02/04/24	ug/m3	0.60	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	01/04/24 - 02/04/24	ug/m3	0.40	1.15	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-2
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	01/04/24 - 02/04/24	ug/m3	0.50	1.39	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	01/04/24 - 02/04/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	01/04/24 - 02/04/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	01/04/24 - 02/04/24	ug/m3	0.20	0.66	4.67	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	01/04/24 - 02/04/24	ug/m3	0.50	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	01/04/24 - 02/04/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	01/04/24 - 02/04/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	01/04/24 - 02/04/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	01/04/24 - 02/04/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	01/04/24 - 02/04/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	01/04/24 - 02/04/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

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18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-2
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	01/04/24 - 02/04/24	ug/m3	0.50	1.48	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	01/04/24 - 02/04/24	ug/m3	0.50	1.19	<1.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	01/04/24 - 02/04/24	ug/m3	0.30	0.86	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	01/04/24 - 02/04/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	01/04/24 - 02/04/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	01/04/24 - 02/04/24	ug/m3	0.60	1.88	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	01/04/24 - 02/04/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	01/04/24 - 02/04/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	01/04/24 - 02/04/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	01/04/24 - 02/04/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-2
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	01/04/24 - 02/04/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).

Sampled By : Peerapat Kahkam

Remark :

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

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

Sample Number : 2434150-3
Sampled Date : Apr 01, 2024
Sample Description : Air Quality
Location : เซอรุสเวิ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Apr 03, 2024
Condition of Sample : Drawn into one 6-L Canister

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Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	01/04/24 - 02/04/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	01/04/24 - 02/04/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	01/04/24 - 02/04/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	01/04/24 - 02/04/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	01/04/24 - 02/04/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	01/04/24 - 02/04/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	01/04/24 - 02/04/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	01/04/24 - 02/04/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	01/04/24 - 02/04/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

Sample Number : 2434150-3
Sampled Date : Apr 01, 2024
Sample Description : Air Quality
Location : เซอรุสเวิ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Apr 03, 2024
Condition of Sample : Drawn into one 6-L Canister

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Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	01/04/24 - 02/04/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	01/04/24 - 02/04/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	01/04/24 - 02/04/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	01/04/24 - 02/04/24	ug/m3	0.04	0.11	0.31	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	01/04/24 - 02/04/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	01/04/24 - 02/04/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	01/04/24 - 02/04/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	01/04/24 - 02/04/24	ug/m3	0.50	1.52	<1.52	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	01/04/24 - 02/04/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	01/04/24 - 02/04/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479-102 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

Sample Number : 2434150-3
Sampled Date : Apr 01, 2024
Sample Description : Air Quality
Location : เซอรุสเวิ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Apr 03, 2024
Condition of Sample : Drawn into one 6-L Canister

Page 19 of 24

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanol	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	01/04/24 - 02/04/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	01/04/24 - 02/04/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanol	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	01/04/24 - 02/04/24	ug/m3	0.05	0.18	0.87	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	01/04/24 - 02/04/24	ug/m3	0.08	0.24	8.17	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	01/04/24 - 02/04/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	01/04/24 - 02/04/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	01/04/24 - 02/04/24	ug/m3	0.07	0.22	<0.22	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	01/04/24 - 02/04/24	ug/m3	0.05	0.16	0.38	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	01/04/24 - 02/04/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

Sample Number : 2434150-3
Sampled Date : Apr 01, 2024
Sample Description : Air Quality
Location : เซอรุสเวิ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Apr 03, 2024
Condition of Sample : Drawn into one 6-L Canister

Page 20 of 24

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	01/04/24 - 02/04/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	01/04/24 - 02/04/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	01/04/24 - 02/04/24	ug/m3	0.06	0.19	0.23	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	01/04/24 - 02/04/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	01/04/24 - 02/04/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	01/04/24 - 02/04/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	01/04/24 - 02/04/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	01/04/24 - 02/04/24	ug/m3	0.80	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	01/04/24 - 02/04/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	01/04/24 - 02/04/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	01/04/24 - 02/04/24	ug/m3	0.30	1.03	1.53	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479-102 (ENL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-3
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	01/04/24 - 02/04/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	01/04/24 - 02/04/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	01/04/24 - 02/04/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	01/04/24 - 02/04/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	01/04/24 - 02/04/24	ug/m3	0.80	2.47	2.67	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	01/04/24 - 02/04/24	ug/m3	0.06	0.17	1.11	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	01/04/24 - 02/04/24	ug/m3	0.30	0.94	2.07	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	01/04/24 - 02/04/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	01/04/24 - 02/04/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	01/04/24 - 02/04/24	ug/m3	0.40	1.15	2.39	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Chontichak
Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-3
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	01/04/24 - 02/04/24	ug/m3	0.50	1.39	<1.39	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	01/04/24 - 02/04/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	01/04/24 - 02/04/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	01/04/24 - 02/04/24	ug/m3	0.20	0.66	7.52	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	01/04/24 - 02/04/24	ug/m3	0.50	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	01/04/24 - 02/04/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	01/04/24 - 02/04/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	01/04/24 - 02/04/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	01/04/24 - 02/04/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	01/04/24 - 02/04/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	01/04/24 - 02/04/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Chontichak
Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

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Sample Number 2434150-3
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	01/04/24 - 02/04/24	ug/m3	0.50	1.48	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	01/04/24 - 02/04/24	ug/m3	0.50	1.19	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	01/04/24 - 02/04/24	ug/m3	0.30	0.86	2.27	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	01/04/24 - 02/04/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	01/04/24 - 02/04/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	01/04/24 - 02/04/24	ug/m3	0.60	1.88	<1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	01/04/24 - 02/04/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	01/04/24 - 02/04/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	01/04/24 - 02/04/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	01/04/24 - 02/04/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	01/04/24 - 02/04/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

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Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2434150
Date Received : Apr 02, 2024
Date Reported : Apr 09, 2024
Report Number : 2946682-1

Page 24 of 24

Sample Number 2434150-3
Sampled Date Apr 01, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced Apr 03, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	01/04/24 - 02/04/24	ug/m3	0.04	0.13	0.15	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :
NEB : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Peerapat Kahlam

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

Approved by

Chontichak
Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2452981
Date Received : May 14, 2024
Date Reported : May 20, 2024
Report Number : 2989591-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Sample Number : 2452981-1
Parameter : Wind Speed / Wind Direction
Location : ตำบลบ้านดง อำเภอเมือง จังหวัดระยอง (บ้านดง) (A1) (GPS 47P 0730907, 1405264)
Sampling Date : May 13 - May 14, 2024
Sampling by : Sawai Tonpho

Time	May 13 - May 14, 2024																	
	WS (m/s)	WD (deg)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
10:00 AM - 11:00 AM	1.8	129.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.4	217.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.6	234.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.4	205.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.4	213.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	4.5	41.8	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.5	318.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.0	300.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.4	33.8	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	3.6	51.8	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.7	46.8	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	1.4	53.8	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.0	32.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.9	13.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.1	4.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.4	21.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayu Jitramont
Assistant General Manager

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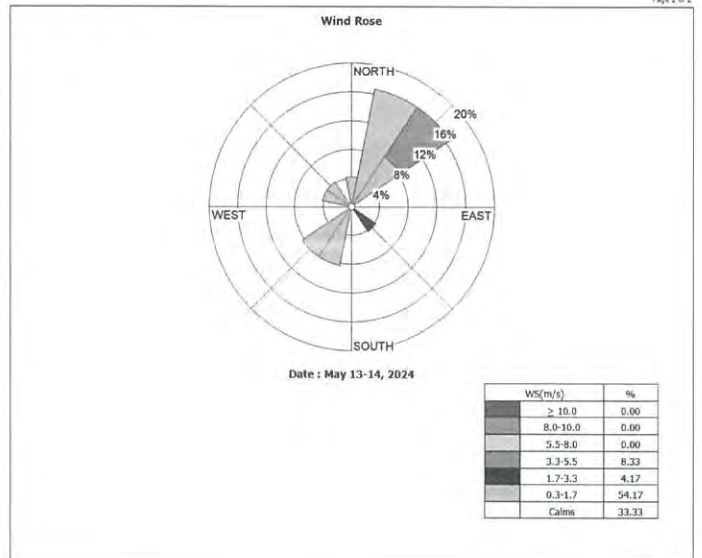


Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2452981
Date Received : May 14, 2024
Date Reported : May 20, 2024
Report Number : 2989591-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE



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Assistant General Manager

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2452981
Date Received : May 14, 2024
Date Reported : May 20, 2024
Report Number : 2989591-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Sample Number : 2452981-2
Parameter : Wind Speed / Wind Direction
Location : ตำบลบ้านดง อำเภอเมือง จังหวัดระยอง (บ้านดง) (A2) (GPS 47P 0729828, 1403318)
Sampling Date : May 13 - May 14, 2024
Sampling by : Sawai Tonpho

Time	May 13 - May 14, 2024																	
	WS (m/s)	WD (deg)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
09:00 AM - 10:00 AM	1.3	311.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	1.0	318.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.7	1.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.7	31.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.8	4.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.9	14.8	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.8	330.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	1.8	7.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.9	8.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	2.8	0.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.6	11.8	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	1.4	13.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	1.6	43.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	2.9	12.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	1.0	1.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.7	359.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.5	12.8	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.7	357.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.6	352.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.8	318.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.0	21.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.8	53.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.9	359.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.8	3.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayu Jitramont
Assistant General Manager

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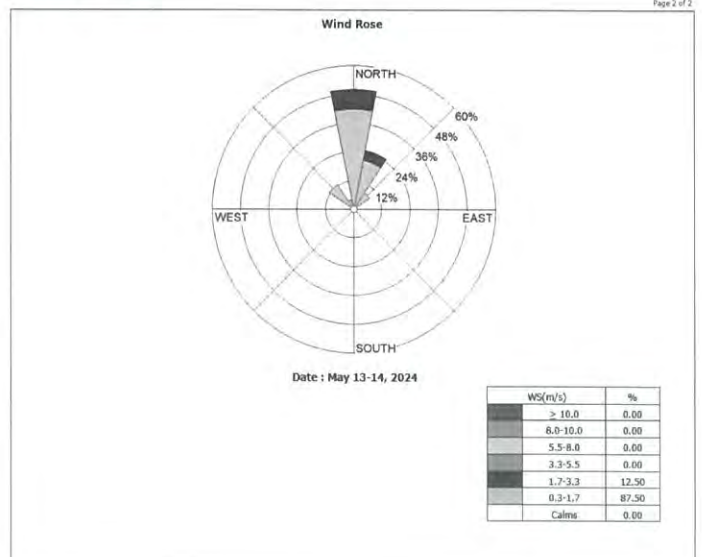


Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2452981
Date Received : May 14, 2024
Date Reported : May 20, 2024
Report Number : 2989591-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE



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Lot ID: 2452981
Date Received : May 14, 2024
Date Reported : May 20, 2024
Report Number : 2989591-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 1 of 2

Sample Number : 2452981-3
Parameter : Wind Speed / Wind Direction
Location : Transtien (A3) (GPS 47P 0730826, 1407360)
Sampling Date : May 13 - May 14, 2024
Sampling by : Savai Tongpho

Time	May 13 - May 14, 2024																	
	WS (m/s)	WD (deg)																
10:00 AM - 11:00 AM	1.2	185.0	S															
11:00 AM - 12:00 PM	0.6	212.0	SSW															
12:00 PM - 01:00 PM	0.4	201.0	SSW															
01:00 PM - 02:00 PM	0.0	-	-															
02:00 PM - 03:00 PM	1.3	274.0	SW															
03:00 PM - 04:00 PM	0.4	8.0	N															
04:00 PM - 05:00 PM	0.6	13.0	NNE															
05:00 PM - 06:00 PM	0.8	8.0	N															
06:00 PM - 07:00 PM	0.3	16.0	N															
07:00 PM - 08:00 PM	0.4	325.0	NW															
08:00 PM - 09:00 PM	0.6	336.0	NNW															
09:00 PM - 10:00 PM	0.3	2.0	N															
10:00 PM - 11:00 PM	1.1	15.0	NNE															
11:00 PM - 12:00 AM	1.6	33.0	NNE															
12:00 AM - 01:00 AM	0.5	8.0	N															
01:00 AM - 02:00 AM	0.5	20.0	NNE															
02:00 AM - 03:00 AM	1.4	15.0	NNE															
03:00 AM - 04:00 AM	0.9	39.0	NE															
04:00 AM - 05:00 AM	0.0	-	-															
05:00 AM - 06:00 AM	1.2	9.0	N															
06:00 AM - 07:00 AM	1.0	14.0	NNE															
07:00 AM - 08:00 AM	1.0	29.0	NNE															
08:00 AM - 09:00 AM	0.9	3.0	N															
09:00 AM - 10:00 AM	0.7	13.0	NNE															

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Saranyut Jitranont
Assistant General Manager

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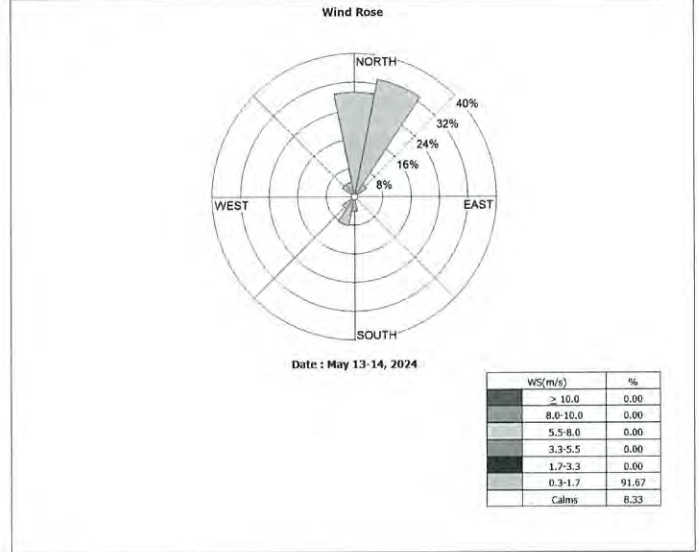
Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2452981
Date Received : May 14, 2024
Date Reported : May 20, 2024
Report Number : 2989591-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 2 of 2



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Saranyut Jitranont
Assistant General Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 1 of 24

Sample Number : 2452984-1
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : ตำบลพิกุลทอง อำเภอเมืองระยอง จังหวัดระยอง (บางตาหลวง) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	13/05/24 - 14/05/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	13/05/24 - 14/05/24	ug/m3	0.10	0.34	<0.34	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	13/05/24 - 14/05/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	13/05/24 - 14/05/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	13/05/24 - 14/05/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	13/05/24 - 14/05/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	13/05/24 - 14/05/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	13/05/24 - 14/05/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	13/05/24 - 14/05/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chonticha Subongkroh
Scientist (3)

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand. PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 2 of 24

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	13/05/24 - 14/05/24	ug/m3	0.07	0.20	Not Detected	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	13/05/24 - 14/05/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	13/05/24 - 14/05/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	13/05/24 - 14/05/24	ug/m3	0.04	0.11	0.31	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	13/05/24 - 14/05/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	13/05/24 - 14/05/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	13/05/24 - 14/05/24	ug/m3	0.10	0.36	<0.36	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	13/05/24 - 14/05/24	ug/m3	0.50	1.52	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	13/05/24 - 14/05/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	13/05/24 - 14/05/24	ug/m3	0.70	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chonticha Subongkroh
Scientist (3)

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand. PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

Page 3 of 24

Sample Number : 2452984-1
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : สำนักงานคณะกรรมการกฤษฎีกา (อาคารใหม่) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanone	13/05/24 - 14/05/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	13/05/24 - 14/05/24	ug/m3	0.40	1.23	1.67	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	13/05/24 - 14/05/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	13/05/24 - 14/05/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	13/05/24 - 14/05/24	ug/m3	0.05	0.18	2.74	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	13/05/24 - 14/05/24	ug/m3	0.08	0.24	12.30	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	13/05/24 - 14/05/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	13/05/24 - 14/05/24	ug/m3	0.08	0.23	0.37	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	13/05/24 - 14/05/24	ug/m3	0.07	0.22	<0.22	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	13/05/24 - 14/05/24	ug/m3	0.05	0.16	1.41	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	13/05/24 - 14/05/24	ug/m3	0.17	0.52	<0.52	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number : 2452984-1
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : สำนักงานคณะกรรมการกฤษฎีกา (อาคารใหม่) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	13/05/24 - 14/05/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	13/05/24 - 14/05/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	13/05/24 - 14/05/24	ug/m3	0.06	0.19	<0.19	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	13/05/24 - 14/05/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	13/05/24 - 14/05/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	13/05/24 - 14/05/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	13/05/24 - 14/05/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	13/05/24 - 14/05/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	13/05/24 - 14/05/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	13/05/24 - 14/05/24	ug/m3	0.30	1.03	2.27	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

Page 5 of 24

Sample Number : 2452984-1
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : สำนักงานคณะกรรมการกฤษฎีกา (อาคารใหม่) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	13/05/24 - 14/05/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	13/05/24 - 14/05/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	13/05/24 - 14/05/24	ug/m3	0.60	1.72	3.31	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	13/05/24 - 14/05/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	13/05/24 - 14/05/24	ug/m3	0.80	2.47	3.26	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	13/05/24 - 14/05/24	ug/m3	0.06	0.17	1.04	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	13/05/24 - 14/05/24	ug/m3	0.30	0.84	6.78	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	13/05/24 - 14/05/24	ug/m3	0.70	2.17	<2.17	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	13/05/24 - 14/05/24	ug/m3	0.60	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	13/05/24 - 14/05/24	ug/m3	0.60	1.76	2.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	13/05/24 - 14/05/24	ug/m3	0.40	1.15	<1.15	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-12U EMAIL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number : 2452984-1
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : สำนักงานคณะกรรมการกฤษฎีกา (อาคารใหม่) (A1) GPS 47P 0730907, 1405264
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	13/05/24 - 14/05/24	ug/m3	0.50	1.39	<1.39	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	13/05/24 - 14/05/24	ug/m3	1.50	4.34	<4.34	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	13/05/24 - 14/05/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	13/05/24 - 14/05/24	ug/m3	0.20	0.66	9.38	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	13/05/24 - 14/05/24	ug/m3	0.50	1.47	2.71	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	13/05/24 - 14/05/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	13/05/24 - 14/05/24	ug/m3	0.70	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	13/05/24 - 14/05/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	13/05/24 - 14/05/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	13/05/24 - 14/05/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	13/05/24 - 14/05/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number	2452984-1								
Sampled Date	May 13, 2024								
Sample Description	Air Quality								
Location	สถานีควบคุมคุณภาพอากาศบริเวณถนนสายเอเชีย(ทางหลวงหมายเลข 4)GPS 47P 0730907, 1405264								
Date Analysis Commenced	May 15, 2024								
Condition of Sample	Drawn into one 6-L Canister								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	13/05/24 - 14/05/24	ug/m3	0.50	1.48	<1.48	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	13/05/24 - 14/05/24	ug/m3	0.50	1.19	<1.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	13/05/24 - 14/05/24	ug/m3	0.30	0.86	5.03	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	13/05/24 - 14/05/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	13/05/24 - 14/05/24	ug/m3	0.11	0.34	<0.34	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	13/05/24 - 14/05/24	ug/m3	0.60	1.88	11.08	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	13/05/24 - 14/05/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	13/05/24 - 14/05/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	13/05/24 - 14/05/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	13/05/24 - 14/05/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	13/05/24 - 14/05/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number	2452984-1									
Sampled Date	May 13, 2024									
Sample Description	Air Quality									
Location	สถานีควบคุมคุณภาพอากาศบริเวณถนนสายเอเชีย(ทางหลวงหมายเลข 4) GPS 47P 0730907, 1405264									
Date Analysis Commenced	May 15, 2024									
Condition of Sample	Drawn into one 6-L Canister									
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location	
Air Testing										
Vinyl Chloride	13/05/24 - 14/05/24	ug/m3	0.04	0.13	<0.13	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong	

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).

Sampled By : Sawai Tongpho

Remark :

LOD : Limit of Detection

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

Approved by

Chonticha Subongkoch
Scientist (3)

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18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number	2452984-2								
Sampled Date	May 13, 2024								
Sample Description	Air Quality								
Location	สถานีควบคุม(A2) (GPS 47P 0729826, 1403318)								
Date Analysis Commenced	May 15, 2024								
Condition of Sample	Drawn into one 6-L Canister								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	13/05/24 - 14/05/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	13/05/24 - 14/05/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	13/05/24 - 14/05/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	13/05/24 - 14/05/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	13/05/24 - 14/05/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	13/05/24 - 14/05/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	13/05/24 - 14/05/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	13/05/24 - 14/05/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	13/05/24 - 14/05/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Scientist (3)

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18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number	2452984-2								
Sampled Date	May 13, 2024								
Sample Description	Air Quality								
Location	สถานีควบคุมคุณภาพอากาศบริเวณถนนสายเอเชีย(ทางหลวงหมายเลข 4) GPS 47P 0729826, 1403318								
Date Analysis Commenced	May 15, 2024								
Condition of Sample	Drawn into one 6-L Canister								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	13/05/24 - 14/05/24	ug/m3	0.07	0.20	0.32	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	13/05/24 - 14/05/24	ug/m3	0.08	0.23	<0.23	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	13/05/24 - 14/05/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	13/05/24 - 14/05/24	ug/m3	0.04	0.11	0.31	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	13/05/24 - 14/05/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	13/05/24 - 14/05/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	13/05/24 - 14/05/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	13/05/24 - 14/05/24	ug/m3	0.50	1.52	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	13/05/24 - 14/05/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	13/05/24 - 14/05/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chonticha Subongkoch
Scientist (3)

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21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number : 2452984-2
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : เซ็นทรัลฮิล(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanon	13/05/24 - 14/05/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	13/05/24 - 14/05/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanon	13/05/24 - 14/05/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	13/05/24 - 14/05/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	13/05/24 - 14/05/24	ug/m3	0.05	0.18	2.99	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	13/05/24 - 14/05/24	ug/m3	0.08	0.24	16.30	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	13/05/24 - 14/05/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	13/05/24 - 14/05/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	13/05/24 - 14/05/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	13/05/24 - 14/05/24	ug/m3	0.05	0.16	2.04	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	13/05/24 - 14/05/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-121 (BML)



Analysis / Test Report

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21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number : 2452984-2
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : เซ็นทรัลฮิล(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	13/05/24 - 14/05/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	13/05/24 - 14/05/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	13/05/24 - 14/05/24	ug/m3	0.06	0.19	1.16	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	13/05/24 - 14/05/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	13/05/24 - 14/05/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	13/05/24 - 14/05/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	13/05/24 - 14/05/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	13/05/24 - 14/05/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	13/05/24 - 14/05/24	ug/m3	0.08	0.24	0.29	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	13/05/24 - 14/05/24	ug/m3	0.30	1.03	1.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

Page 13 of 24

Sample Number : 2452984-2
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : เซ็นทรัลฮิล(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	13/05/24 - 14/05/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	13/05/24 - 14/05/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	13/05/24 - 14/05/24	ug/m3	0.60	1.72	<1.72	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	13/05/24 - 14/05/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	13/05/24 - 14/05/24	ug/m3	0.80	2.47	2.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	13/05/24 - 14/05/24	ug/m3	0.06	0.17	0.90	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	13/05/24 - 14/05/24	ug/m3	0.30	0.94	9.20	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	13/05/24 - 14/05/24	ug/m3	0.70	2.17	<2.17	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	13/05/24 - 14/05/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	13/05/24 - 14/05/24	ug/m3	0.60	1.76	<1.76	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	13/05/24 - 14/05/24	ug/m3	0.40	1.15	1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-121 (BML)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number : 2452984-2
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : เซ็นทรัลฮิล(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	13/05/24 - 14/05/24	ug/m3	0.50	1.39	<1.39	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	13/05/24 - 14/05/24	ug/m3	1.50	4.34	4.69	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	13/05/24 - 14/05/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	13/05/24 - 14/05/24	ug/m3	0.20	0.66	13.34	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	13/05/24 - 14/05/24	ug/m3	0.50	1.47	1.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	13/05/24 - 14/05/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	13/05/24 - 14/05/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	13/05/24 - 14/05/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	13/05/24 - 14/05/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	13/05/24 - 14/05/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	13/05/24 - 14/05/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-121 (BML)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

Page 15 of 24

Sample Number 2452984-2
Sampled Date May 13, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced May 15, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	13/05/24 - 14/05/24	ug/m3	0.50	1.48	<1.48	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	13/05/24 - 14/05/24	ug/m3	0.50	1.19	<1.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	13/05/24 - 14/05/24	ug/m3	0.30	0.86	5.95	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	13/05/24 - 14/05/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	13/05/24 - 14/05/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	13/05/24 - 14/05/24	ug/m3	0.60	1.88	5.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	13/05/24 - 14/05/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	13/05/24 - 14/05/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	13/05/24 - 14/05/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	13/05/24 - 14/05/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	13/05/24 - 14/05/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479-1011 (EMAIL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

Page 16 of 24

Sample Number 2452984-2
Sampled Date May 13, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced May 15, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	13/05/24 - 14/05/24	ug/m3	0.04	0.13	<0.13	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :
NEB : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Sawai Tonpho

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

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number 2452984-3
Sampled Date May 13, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced May 15, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	13/05/24 - 14/05/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	13/05/24 - 14/05/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	13/05/24 - 14/05/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	13/05/24 - 14/05/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	13/05/24 - 14/05/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	13/05/24 - 14/05/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	13/05/24 - 14/05/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	13/05/24 - 14/05/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	13/05/24 - 14/05/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number 2452984-3
Sampled Date May 13, 2024
Sample Description Air Quality
Location ๙๙๙๙๙๙๙๙(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced May 15, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	13/05/24 - 14/05/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	13/05/24 - 14/05/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	13/05/24 - 14/05/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	13/05/24 - 14/05/24	ug/m3	0.04	0.11	0.22	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	13/05/24 - 14/05/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	13/05/24 - 14/05/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	13/05/24 - 14/05/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	13/05/24 - 14/05/24	ug/m3	0.50	1.52	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	13/05/24 - 14/05/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	13/05/24 - 14/05/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

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21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

Page 19 of 24

Sample Number 2452984-3
Sampled Date May 13, 2024
Sample Description Air Quality
Location เสาอากาศ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced May 15, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanone	13/05/24 - 14/05/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	13/05/24 - 14/05/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	13/05/24 - 14/05/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	13/05/24 - 14/05/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	13/05/24 - 14/05/24	ug/m3	0.05	0.18	3.35	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	13/05/24 - 14/05/24	ug/m3	0.08	0.24	10.17	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	13/05/24 - 14/05/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	13/05/24 - 14/05/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	13/05/24 - 14/05/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	13/05/24 - 14/05/24	ug/m3	0.05	0.16	0.70	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	13/05/24 - 14/05/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number 2452984-3
Sampled Date May 13, 2024
Sample Description Air Quality
Location เสาอากาศ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced May 15, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	13/05/24 - 14/05/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromform	13/05/24 - 14/05/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	13/05/24 - 14/05/24	ug/m3	0.06	0.19	0.23	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	13/05/24 - 14/05/24	ug/m3	0.49	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	13/05/24 - 14/05/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	13/05/24 - 14/05/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	13/05/24 - 14/05/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	13/05/24 - 14/05/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	13/05/24 - 14/05/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	13/05/24 - 14/05/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	13/05/24 - 14/05/24	ug/m3	0.30	1.03	1.57	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

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Sample Number 2452984-3
Sampled Date May 13, 2024
Sample Description Air Quality
Location เสาอากาศ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced May 15, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	13/05/24 - 14/05/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	13/05/24 - 14/05/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	13/05/24 - 14/05/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	13/05/24 - 14/05/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	13/05/24 - 14/05/24	ug/m3	0.80	2.47	2.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	13/05/24 - 14/05/24	ug/m3	0.06	0.17	1.39	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	13/05/24 - 14/05/24	ug/m3	0.30	0.94	6.26	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	13/05/24 - 14/05/24	ug/m3	0.70	2.17	<2.17	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	13/05/24 - 14/05/24	ug/m3	0.60	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	13/05/24 - 14/05/24	ug/m3	0.60	1.76	<1.76	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	13/05/24 - 14/05/24	ug/m3	0.40	1.15	<1.15	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chonticha Subongkroh
Scientist (3)

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479-101 EMAIL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

Page 22 of 24

Sample Number 2452984-3
Sampled Date May 13, 2024
Sample Description Air Quality
Location เสาอากาศ(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced May 15, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	13/05/24 - 14/05/24	ug/m3	0.50	1.39	<1.39	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	13/05/24 - 14/05/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	13/05/24 - 14/05/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	13/05/24 - 14/05/24	ug/m3	0.20	0.66	9.57	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	13/05/24 - 14/05/24	ug/m3	0.50	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	13/05/24 - 14/05/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	13/05/24 - 14/05/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	13/05/24 - 14/05/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	13/05/24 - 14/05/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	13/05/24 - 14/05/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	13/05/24 - 14/05/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

Page 23 of 24

Sample Number : 2452984-3
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : ตำบลหนองแวง(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	13/05/24 - 14/05/24	ug/m3	0.50	1.48	<1.48	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	13/05/24 - 14/05/24	ug/m3	0.50	1.19	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	13/05/24 - 14/05/24	ug/m3	0.30	0.86	1.51	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	13/05/24 - 14/05/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	13/05/24 - 14/05/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	13/05/24 - 14/05/24	ug/m3	0.60	1.88	6.18	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	13/05/24 - 14/05/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	13/05/24 - 14/05/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	13/05/24 - 14/05/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	13/05/24 - 14/05/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	13/05/24 - 14/05/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2452984
Date Received : May 14, 2024
Date Reported : May 17, 2024
Report Number : 2989600-1

Page 24 of 24

Sample Number : 2452984-3
Sampled Date : May 13, 2024
Sample Description : Air Quality
Location : ตำบลหนองแวง(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : May 15, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	13/05/24 - 14/05/24	ug/m3	0.04	0.13	<0.13	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :
NEB : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Sawai Tongho

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

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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479-101 (ENAL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2469239
Date Received : Jun 20, 2024
Date Reported : Jun 24, 2024
Report Number : 3028317-1

Page 1 of 2

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Sample Number : 2469239-1
Parameter : Wind Speed / Wind Direction
Location : ตำบลหนองแวง(A1) (GPS 47P 0730907, 1405264)
Sampling Date : Jun 19 - Jun 20, 2024
Sampling by : Anurak Tongkhajonsakda

Time	Jun 19 - Jun 20, 2024															
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	1.9	189.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	1.5	245.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	2.1	244.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.4	252.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.2	256.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	1.6	255.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	1.6	168.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.4	249.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.5	215.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	2.8	229.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	1.0	218.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	3.2	243.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	2.8	253.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	1.6	214.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.5	196.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.4	207.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.7	218.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	2.2	243.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.3	218.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	2.9	221.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.7	246.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.3	198.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.1	204.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

Approved by

Sarayu Jitranont
Assistant General Manager

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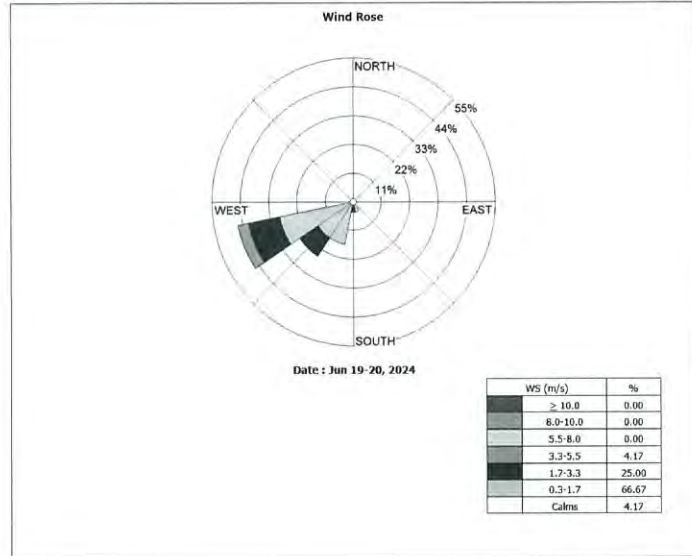
Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2469239
Date Received : Jun 20, 2024
Date Reported : Jun 24, 2024
Report Number : 3028317-1

Page 2 of 2

P/O :
Project Name : Monitoring
Project Location : WHA EIE



Approved by

Sarayu Jitranont
Assistant General Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2469239
Date Received :Jun 20, 2024
Date Reported :Jun 24, 2024
Report Number :3028317-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Sample Number : 2469239-2
Parameter : Wind Speed / Wind Direction
Location : เซ็นทรัล (A2) (GPS 47P 0729828, 1403318)
Sampling Date : Jun 19 - Jun 20, 2024
Sampling by : Anurak Tongkhajonsakda

Time	Jun 19 - Jun 20, 2024																			
	WS (m/s)	WD (deg)																		
11:00 AM - 12:00 PM	0.3	241.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	1.3	206.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.6	210.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.6	244.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.9	216.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.3	213.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.8	220.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	1.2	194.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.4	205.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.8	231.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.4	201.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.6	211.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	1.4	218.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	1.2	250.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.9	247.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.5	239.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.8	235.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.0	224.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.6	238.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	1.1	238.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.8	192.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.5	220.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	1.2	192.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Saranyuth Jittrantont
Assistant General Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2469239
Date Received :Jun 20, 2024
Date Reported :Jun 24, 2024
Report Number :3028317-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Sample Number : 2469239-3
Parameter : Wind Speed / Wind Direction
Location : เซ็นทรัล (A3) (GPS 47P 0730826, 1407360)
Sampling Date : Jun 19 - Jun 20, 2024
Sampling by : Anurak Tongkhajonsakda

Time	Jun 19 - Jun 20, 2024																			
	WS (m/s)	WD (deg)																		
10:00 AM - 11:00 AM	1.0	177.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	1.0	233.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.4	177.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.3	187.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.6	251.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	1.5	241.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.8	229.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.4	212.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.9	201.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.1	215.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.5	223.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	1.1	237.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.6	238.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.5	216.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.9	242.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	1.2	245.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.9	256.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.6	241.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.9	239.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.8	235.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.3	185.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.1	192.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Saranyuth Jittrantont
Assistant General Manager

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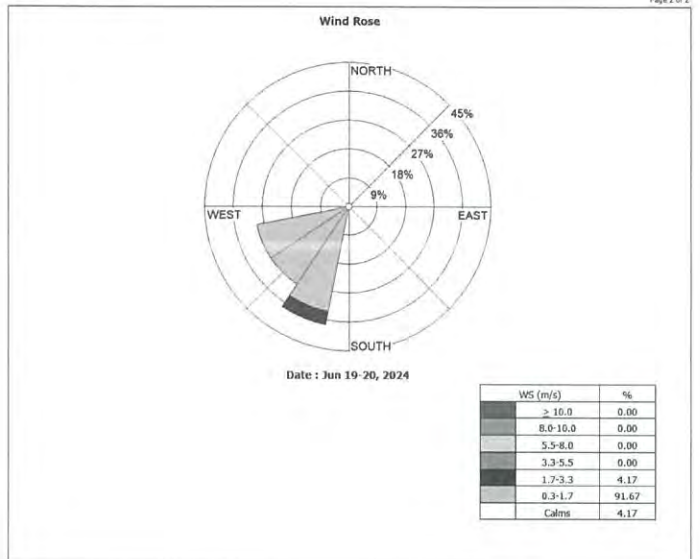


Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2469239
Date Received :Jun 20, 2024
Date Reported :Jun 24, 2024
Report Number :3028317-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE



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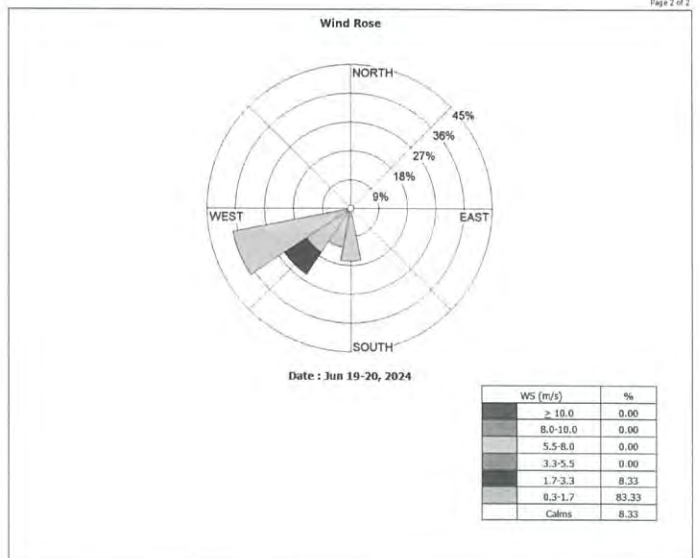


Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

Lot ID: 2469239
Date Received :Jun 20, 2024
Date Reported :Jun 24, 2024
Report Number :3028317-1

P/O :
Project Name : Monitoring
Project Location : WHA EIE



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Assistant General Manager

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 1 of 24

Sample Number	2469246-1								
Sampled Date	Jun 19, 2024								
Sample Description	Air Quality								
Location	สถานีวัดคุณภาพอากาศบริเวณถนนสุขุมวิท(หน้าทาง)(A1)GPS 47P 0730907, 1405264								
Date Analysis Commenced	Jun 21, 2024								
Condition of Sample	Drawn into one 6-L Canister								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOQ)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	19/06/24 - 20/06/24	ug/m3	0.50	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	19/06/24 - 20/06/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	19/06/24 - 20/06/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	19/06/24 - 20/06/24	ug/m3	0.50	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	19/06/24 - 20/06/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	19/06/24 - 20/06/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	19/06/24 - 20/06/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	19/06/24 - 20/06/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	19/06/24 - 20/06/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 2 of 24

Sample Number	2469246-1								
Sampled Date	Jun 19, 2024								
Sample Description	Air Quality								
Location	สถานีวัดคุณภาพอากาศบริเวณถนนสุขุมวิท(หน้าทาง)(A1)GPS 47P 0730907, 1405264								
Date Analysis Commenced	Jun 21, 2024								
Condition of Sample	Drawn into one 6-L Canister								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	19/06/24 - 20/06/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	19/06/24 - 20/06/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	19/06/24 - 20/06/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	19/06/24 - 20/06/24	ug/m3	0.04	0.11	<0.11	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	19/06/24 - 20/06/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	19/06/24 - 20/06/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	19/06/24 - 20/06/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	19/06/24 - 20/06/24	ug/m3	0.50	1.52	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	19/06/24 - 20/06/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	19/06/24 - 20/06/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 3 of 24

Sample Number	2469246-1									Page 2 of 2
Sampled Date	Jun 19, 2024									
Sample Description	Air Quality									
Location	สถานีวัดคุณภาพอากาศบริเวณถนนสุขุมวิท(หน้าทาง)(A1)GPS 47P 0730907, 1405264									
Date Analysis Commenced	Jun 21, 2024									
Condition of Sample	Drawn into one 6-L Canister									
Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location	
Air Testing										
2-Pentanone	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
2-Propanol	19/06/24 - 20/06/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
3-Hexanone	19/06/24 - 20/06/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
3-Pentanone	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Acetaldehyde	19/06/24 - 20/06/24	ug/m3	0.05	0.18	0.97	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong	
Acetone	19/06/24 - 20/06/24	ug/m3	0.08	0.24	5.56	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Acetonitrile	19/06/24 - 20/06/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong	
Acrolein	19/06/24 - 20/06/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong	
Acrylonitrile	19/06/24 - 20/06/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong	
Benzene	19/06/24 - 20/06/24	ug/m3	0.05	0.16	1.02	7.5	Based on US EPA Compendium Method, TO-15	PCD	Rayong	
Benzyl Chloride	19/06/24 - 20/06/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong	

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Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 4 of 24

Sample Number	2469246-1								
Sampled Date	Jun 19, 2024								
Sample Description	Air Quality								
Location	สถานีวัดคุณภาพอากาศบริเวณถนนสุขุมวิท(หน้าทาง)(A1)GPS 47P 0730907, 1405264								
Date Analysis Commenced	Jun 21, 2024								
Condition of Sample	Drawn into one 6-L Canister								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	19/06/24 - 20/06/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	19/06/24 - 20/06/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	19/06/24 - 20/06/24	ug/m3	0.06	0.19	0.78	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	19/06/24 - 20/06/24	ug/m3	0.49	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	19/06/24 - 20/06/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	HEB	Rayong
Carbon Tetrachloride	19/06/24 - 20/06/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	19/06/24 - 20/06/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	19/06/24 - 20/06/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	19/06/24 - 20/06/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	19/06/24 - 20/06/24	ug/m3	0.30	1.03	1.94	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 5 of 24

Sample Number : 2469246-1
Sample Date : Jun 19, 2024
Sample Description : Air Quality
Location : สำนักงานเขตอุตสาหกรรมสิ่งแวดล้อมและพลังงาน(กรุงเทพฯ)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Jun 21, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	19/06/24 - 20/06/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	19/06/24 - 20/06/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	19/06/24 - 20/06/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	19/06/24 - 20/06/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	19/06/24 - 20/06/24	ug/m3	0.80	2.47	3.07	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	19/06/24 - 20/06/24	ug/m3	0.06	0.17	<0.17	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	19/06/24 - 20/06/24	ug/m3	0.30	0.94	3.01	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	19/06/24 - 20/06/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	19/06/24 - 20/06/24	ug/m3	0.60	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	19/06/24 - 20/06/24	ug/m3	0.40	1.15	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 6 of 24

Sample Number : 2469246-1
Sample Date : Jun 19, 2024
Sample Description : Air Quality
Location : สำนักงานเขตอุตสาหกรรมสิ่งแวดล้อมและพลังงาน(กรุงเทพฯ)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Jun 21, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	19/06/24 - 20/06/24	ug/m3	0.50	1.39	<1.39	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	19/06/24 - 20/06/24	ug/m3	1.50	4.34	<4.34	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	19/06/24 - 20/06/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	19/06/24 - 20/06/24	ug/m3	0.20	0.66	11.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	19/06/24 - 20/06/24	ug/m3	0.50	1.47	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	19/06/24 - 20/06/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	19/06/24 - 20/06/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	19/06/24 - 20/06/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	19/06/24 - 20/06/24	ug/m3	0.50	1.43	<1.43	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	19/06/24 - 20/06/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	19/06/24 - 20/06/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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479-332 (EMAIL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 7 of 24

Sample Number : 2469246-1
Sample Date : Jun 19, 2024
Sample Description : Air Quality
Location : สำนักงานเขตอุตสาหกรรมสิ่งแวดล้อมและพลังงาน(กรุงเทพฯ)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Jun 21, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	19/06/24 - 20/06/24	ug/m3	0.50	1.48	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	19/06/24 - 20/06/24	ug/m3	0.50	1.19	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	19/06/24 - 20/06/24	ug/m3	0.30	0.86	2.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	19/06/24 - 20/06/24	ug/m3	0.70	2.13	<2.13	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	19/06/24 - 20/06/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	19/06/24 - 20/06/24	ug/m3	0.60	1.88	<1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	19/06/24 - 20/06/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	19/06/24 - 20/06/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	19/06/24 - 20/06/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	19/06/24 - 20/06/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 8 of 24

Sample Number : 2469246-1
Sample Date : Jun 19, 2024
Sample Description : Air Quality
Location : สำนักงานเขตอุตสาหกรรมสิ่งแวดล้อมและพลังงาน(กรุงเทพฯ)(A1)GPS 47P 0730907, 1405264
Date Analysis Commenced : Jun 21, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	19/06/24 - 20/06/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :
NEB : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 128 Special Part 13 D dated January 27, B.E. 2552 (2009).

Sampled By : Anurak Tonghajasakda

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

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Scientist (3)

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479-332 (EMAIL)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 9 of 24

Sample Number 2469246-2
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location หนองนาหนู(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	19/06/24 - 20/06/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	19/06/24 - 20/06/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	19/06/24 - 20/06/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	19/06/24 - 20/06/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	19/06/24 - 20/06/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	19/06/24 - 20/06/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	19/06/24 - 20/06/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromoethane	19/06/24 - 20/06/24	ug/m3	0.10	0.39	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	19/06/24 - 20/06/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 10 of 24

Sample Number 2469246-2
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location หนองนาหนู(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	19/06/24 - 20/06/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	19/06/24 - 20/06/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	19/06/24 - 20/06/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	19/06/24 - 20/06/24	ug/m3	0.04	0.11	<0.11	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	19/06/24 - 20/06/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	19/06/24 - 20/06/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	19/06/24 - 20/06/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	19/06/24 - 20/06/24	ug/m3	0.50	1.52	<1.52	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	19/06/24 - 20/06/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	19/06/24 - 20/06/24	ug/m3	0.70	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

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Sample Number 2469246-2
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location หนองนาหนู(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanone	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	19/06/24 - 20/06/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	19/06/24 - 20/06/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	19/06/24 - 20/06/24	ug/m3	0.05	0.18	1.70	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	19/06/24 - 20/06/24	ug/m3	0.08	0.24	3.99	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	19/06/24 - 20/06/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	19/06/24 - 20/06/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	19/06/24 - 20/06/24	ug/m3	0.07	0.22	Not Detected	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	19/06/24 - 20/06/24	ug/m3	0.05	0.16	0.32	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	19/06/24 - 20/06/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

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Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 12 of 24

Sample Number 2469246-2
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location หนองนาหนู(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	19/06/24 - 20/06/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	19/06/24 - 20/06/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	19/06/24 - 20/06/24	ug/m3	0.06	0.19	<0.19	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	19/06/24 - 20/06/24	ug/m3	0.49	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	19/06/24 - 20/06/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	19/06/24 - 20/06/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	19/06/24 - 20/06/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	19/06/24 - 20/06/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	19/06/24 - 20/06/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	19/06/24 - 20/06/24	ug/m3	0.30	1.03	1.61	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Sample Number 2469246-2
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location เซเว่นซูเปอร์(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Page 13 of 24

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	19/06/24 - 20/06/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	19/06/24 - 20/06/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	19/06/24 - 20/06/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	19/06/24 - 20/06/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	19/06/24 - 20/06/24	ug/m3	0.80	2.47	2.97	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	19/06/24 - 20/06/24	ug/m3	0.06	0.17	<0.17	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	19/06/24 - 20/06/24	ug/m3	0.30	0.94	4.67	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	19/06/24 - 20/06/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	19/06/24 - 20/06/24	ug/m3	0.60	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	19/06/24 - 20/06/24	ug/m3	0.40	1.15	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Sample Number 2469246-2
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location เซเว่นซูเปอร์(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Page 14 of 24

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	19/06/24 - 20/06/24	ug/m3	0.50	1.39	<1.39	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	19/06/24 - 20/06/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	19/06/24 - 20/06/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	19/06/24 - 20/06/24	ug/m3	0.20	0.66	5.08	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	19/06/24 - 20/06/24	ug/m3	0.50	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	19/06/24 - 20/06/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	19/06/24 - 20/06/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	19/06/24 - 20/06/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	19/06/24 - 20/06/24	ug/m3	0.50	1.43	<1.43	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	19/06/24 - 20/06/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	19/06/24 - 20/06/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Sample Number 2469246-2
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location เซเว่นซูเปอร์(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Page 15 of 24

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	19/06/24 - 20/06/24	ug/m3	0.50	1.48	<1.48	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	19/06/24 - 20/06/24	ug/m3	0.50	1.19	<1.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	19/06/24 - 20/06/24	ug/m3	0.30	0.86	<0.86	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	19/06/24 - 20/06/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	19/06/24 - 20/06/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	19/06/24 - 20/06/24	ug/m3	0.60	1.88	<1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	19/06/24 - 20/06/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	19/06/24 - 20/06/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	19/06/24 - 20/06/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	19/06/24 - 20/06/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Sample Number 2469246-2
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location เซเว่นซูเปอร์(A2) (GPS 47P 0729828, 1403318)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

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Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	19/06/24 - 20/06/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :
NEB : Notification of National Environment Board, B.E. 2560 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).
Sampled By : Anurak Tongkhajonsakda

Remark :
LOD : Limit of Detection
"c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Chontichak
Chonticha Subongkoch
Scientist (3)

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Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

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Sample Number 2469246-3
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location กรุงเทพมหานคร (A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,1,1-Trichloroethane	19/06/24 - 20/06/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2,2-Tetrachloroethane	19/06/24 - 20/06/24	ug/m3	0.10	0.34	Not Detected	83	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,1,2-Trichloro-1,2,2-Trifluoroethane	19/06/24 - 20/06/24	ug/m3	1.00	3.83	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1,2-Trichloroethane	19/06/24 - 20/06/24	ug/m3	0.90	2.73	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethane	19/06/24 - 20/06/24	ug/m3	0.70	2.02	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,1-Dichloroethene	19/06/24 - 20/06/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,3-Trimethylbenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trichlorobenzene	19/06/24 - 20/06/24	ug/m3	1.20	3.71	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2,4-Trimethylbenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.46	<2.46	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,2-Dibromomethane	19/06/24 - 20/06/24	ug/m3	0.10	0.38	Not Detected	370	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorobenzene	19/06/24 - 20/06/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

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Chontichak
Chonticha Subongkroh
Scientist (3)

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

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Sample Number 2469246-3
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location กรุงเทพมหานคร (A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,2-Dichloroethane	19/06/24 - 20/06/24	ug/m3	0.07	0.20	<0.20	48	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichloropropane	19/06/24 - 20/06/24	ug/m3	0.08	0.23	Not Detected	82	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,2-Dichlorotetrafluoroethane	19/06/24 - 20/06/24	ug/m3	1.20	3.50	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3,5-Trimethylbenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.46	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,3-Butadiene	19/06/24 - 20/06/24	ug/m3	0.04	0.11	<0.11	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,3-Dichlorobenzene	19/06/24 - 20/06/24	ug/m3	0.20	0.60	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1,4-Dichlorobenzene	19/06/24 - 20/06/24	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1,4-Dioxane	19/06/24 - 20/06/24	ug/m3	0.10	0.36	Not Detected	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
1-Butanol	19/06/24 - 20/06/24	ug/m3	0.50	1.52	<1.52	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
1-Propanol	19/06/24 - 20/06/24	ug/m3	0.40	1.23	<1.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Hexanone	19/06/24 - 20/06/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

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Sample Number 2469246-3
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location กรุงเทพมหานคร (A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
2-Pentanone	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
2-Propanol	19/06/24 - 20/06/24	ug/m3	0.40	1.23	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Hexanone	19/06/24 - 20/06/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
3-Pentanone	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetaldehyde	19/06/24 - 20/06/24	ug/m3	0.05	0.18	1.48	860	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acetone	19/06/24 - 20/06/24	ug/m3	0.08	0.24	5.70	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acetonitrile	19/06/24 - 20/06/24	ug/m3	0.30	0.84	<0.84	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Acrolein	19/06/24 - 20/06/24	ug/m3	0.08	0.23	<0.23	0.55	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Acrylonitrile	19/06/24 - 20/06/24	ug/m3	0.07	0.22	<0.22	10	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	19/06/24 - 20/06/24	ug/m3	0.05	0.16	0.38	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzyl Chloride	19/06/24 - 20/06/24	ug/m3	0.17	0.52	Not Detected	12	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

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Sample Number 2469246-3
Sampled Date Jun 19, 2024
Sample Description Air Quality
Location กรุงเทพมหานคร (A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced Jun 21, 2024
Condition of Sample Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Bromodichloromethane	19/06/24 - 20/06/24	ug/m3	1.00	3.35	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromoform	19/06/24 - 20/06/24	ug/m3	1.00	5.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Bromomethane	19/06/24 - 20/06/24	ug/m3	0.06	0.19	0.23	190	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Butanal	19/06/24 - 20/06/24	ug/m3	0.49	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Carbon Disulfide	19/06/24 - 20/06/24	ug/m3	0.05	0.16	<0.16	100	Based on US EPA Compendium Method, TO-15	NEB	Rayong
Carbon Tetrachloride	19/06/24 - 20/06/24	ug/m3	0.10	0.31	<0.31	150	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chlorobenzene	19/06/24 - 20/06/24	ug/m3	0.80	2.30	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chlorodifluoromethane (HCFC-22)	19/06/24 - 20/06/24	ug/m3	0.60	1.77	<1.77	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroethane	19/06/24 - 20/06/24	ug/m3	0.40	1.32	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Chloroform	19/06/24 - 20/06/24	ug/m3	0.08	0.24	<0.24	57	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Chloromethane	19/06/24 - 20/06/24	ug/m3	0.30	1.03	2.60	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkroh
Scientist (3)

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

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Sample Number : 2469246-3
Sampled Date : Jun 19, 2024
Sample Description : Air Quality
Location : เซารุสีง(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Jun 21, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
cis-1,2-Dichloroethene	19/06/24 - 20/06/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
cis-1,3-Dichloropropene	19/06/24 - 20/06/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclohexane	19/06/24 - 20/06/24	ug/m3	0.60	1.72	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Cyclopentane	19/06/24 - 20/06/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichlorodifluoromethane (CFC-112)	19/06/24 - 20/06/24	ug/m3	0.80	2.47	3.16	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Dichloromethane	19/06/24 - 20/06/24	ug/m3	0.06	0.17	<0.17	210	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethanol	19/06/24 - 20/06/24	ug/m3	0.30	0.94	4.22	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Ethyl Benzene	19/06/24 - 20/06/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexanal	19/06/24 - 20/06/24	ug/m3	0.60	2.05	<2.05	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Hexane	19/06/24 - 20/06/24	ug/m3	0.60	1.76	<1.76	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Isobutene	19/06/24 - 20/06/24	ug/m3	0.40	1.15	1.33	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

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Sample Number : 2469246-3
Sampled Date : Jun 19, 2024
Sample Description : Air Quality
Location : เซารุสีง(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Jun 21, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Isoprene	19/06/24 - 20/06/24	ug/m3	0.50	1.39	2.28	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
m,p-Xylene	19/06/24 - 20/06/24	ug/m3	1.50	4.34	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methacrolein	19/06/24 - 20/06/24	ug/m3	0.50	1.43	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methanol	19/06/24 - 20/06/24	ug/m3	0.20	0.66	8.94	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Ethyl Ketone	19/06/24 - 20/06/24	ug/m3	0.50	1.47	<1.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Iodide	19/06/24 - 20/06/24	ug/m3	0.90	2.90	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Isobutyl Ketone	19/06/24 - 20/06/24	ug/m3	0.70	2.05	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl tert butyl ether	19/06/24 - 20/06/24	ug/m3	0.60	1.80	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Methyl Vinyl Ketone	19/06/24 - 20/06/24	ug/m3	0.50	1.43	<1.43	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
o-Xylene	19/06/24 - 20/06/24	ug/m3	0.70	2.17	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Pentanal	19/06/24 - 20/06/24	ug/m3	0.50	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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479-12U ENGL



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 23 of 24

Sample Number : 2469246-3
Sampled Date : Jun 19, 2024
Sample Description : Air Quality
Location : เซารุสีง(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Jun 21, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Pentane	19/06/24 - 20/06/24	ug/m3	0.50	1.48	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propanal	19/06/24 - 20/06/24	ug/m3	0.50	1.19	<1.19	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	19/06/24 - 20/06/24	ug/m3	0.30	0.86	1.93	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Styrene	19/06/24 - 20/06/24	ug/m3	0.70	2.13	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Tetrachloroethylene	19/06/24 - 20/06/24	ug/m3	0.11	0.34	Not Detected	400	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Toluene	19/06/24 - 20/06/24	ug/m3	0.60	1.88	<1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,2-Dichloroethene	19/06/24 - 20/06/24	ug/m3	0.70	1.98	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
trans-1,3-Dichloropropene	19/06/24 - 20/06/24	ug/m3	0.80	2.27	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Trichloroethylene	19/06/24 - 20/06/24	ug/m3	0.09	0.27	Not Detected	130	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Trichlorofluoromethane (F-11)	19/06/24 - 20/06/24	ug/m3	0.90	2.81	<2.81	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Vinyl Acetate	19/06/24 - 20/06/24	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand
21150

P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2469246
Date Received : Jun 20, 2024
Date Reported : Jun 22, 2024
Report Number : 3028326-1

Page 24 of 24

Sample Number : 2469246-3
Sampled Date : Jun 19, 2024
Sample Description : Air Quality
Location : เซารุสีง(A3) (GPS 47P 0730826, 1407360)
Date Analysis Commenced : Jun 21, 2024
Condition of Sample : Drawn into one 6-L Canister

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Vinyl Chloride	19/06/24 - 20/06/24	ug/m3	0.04	0.13	Not Detected	20	Based on US EPA Compendium Method, TO-15	PCD	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2550 (2017)
PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009).

Sampled By : Anurak Tongkhajonsakda

Remark :

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

Approved by

Chontichak
Chonticha Subongkloch
Scientist (3)

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ภาคผนวก ค-2

คุณภาพน้ำผิวดิน



Analysis / Test Report



TESTING

No.0042

Lot ID: 2422835

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2930988-1

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Page 1 of 4

Sample Number	2422835-1
Sampled Date	Mar 01, 2024 10:50 AM
Sample Description	Surface Water
Location	บริเวณถนนพหลโยธินตรงข้ามวัดทองนพคุณ (W1)
Date Analysis Commenced	Mar 01, 2024
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							
(A) Arsenic	mg/L	0.0003	0.0005	0.005	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Copper	mg/L	0.0003	0.0005	0.0008	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
(A) Iron	mg/L	0.003	0.005	1.62	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Manganese	mg/L	0.0003	0.0005	0.20	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Dej Changchong
Senior Manager

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Analysis / Test Report



TESTING

No.0042

Lot ID: 2422835

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2930988-1

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Page 2 of 4

Sample Number	2422835-1
Sampled Date	Mar 01, 2024 10:50 AM
Sample Description	Surface Water
Location	บริเวณถนนพหลโยธินตรงข้ามวัดทองนพคุณ (W1)
Date Analysis Commenced	Mar 01, 2024
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							
(A) Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision 6	Bangkok
(A) Nickel	mg/L	0.0003	0.0005	0.002	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Selenium	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Zinc	mg/L	0.003	0.005	0.03	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
(A) Total Coliform	MPN/100mL	-	-	13000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	6.8	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - O (C)	Rayong

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Senior Manager

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Analysis / Test Report



TESTING

No.0042

Lot ID: 2422835

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2930988-1

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Page 3 of 4

Sample Number	2422835-1
Sampled Date	Mar 01, 2024 10:50 AM
Sample Description	Surface Water
Location	บริเวณถนนพหลโยธินตรงข้ามวัดทองนพคุณ (W1)
Date Analysis Commenced	Mar 01, 2024
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							
Nitrate as N *	mg/L	0.015	0.05	1.71	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Oil & Grease *	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.5	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	34.9	n ^o	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	182	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	169	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, 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^o Change from Natural condition not more than 3 degree C

Sampling By : Wanlop Hunchainaw , Pattarapol Sawangiatam

Remark :

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

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Dej Changchong
Senior Manager

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Analysis / Test Report



TESTING

No.0042

Lot ID: 2422835

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2930988-1

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name : Monitoring

Project Location : WHA EIE

Page 4 of 4

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. The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.							
---	--	--	--	--	--	--	--

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930988-2

Page 1 of 1

Sample Number	2422835-1						
Sampled Date	Mar 01, 2024 10:50 AM						
Sample Description	Surface Water						
Location	บริเวณจุดตรวจน้ำทิ้งของโรงงาน (W1)						
Date Analysis Commenced	Mar 01, 2024						
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	0.02	0.05	0.76	≤0.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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
Sampling By : Wanlop Hunchainow , Pattarapol Sawangjaliam

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

Approved by

Dej Changchon
Senior Manager



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930989-1

Page 1 of 4

Sample Number	2422835-2						
Sampled Date	Mar 01, 2024 10:37 AM						
Sample Description	Surface Water						
Location	บริเวณจุดตรวจน้ำทิ้งของโรงงาน(W2)						
Date Analysis Commenced	Mar 01, 2024						
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							
^(A) Arsenic	mg/L	0.0003	0.0005	0.004	≤0.01	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Copper	mg/L	0.0003	0.0005	0.002	≤0.1	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
^(A) Iron	mg/L	0.003	0.005	0.73	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Manganese	mg/L	0.0003	0.0005	0.50	≤1	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Approved by

Dej Changchon
Senior Manager



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930989-1

Page 2 of 4

Sample Number	2422835-2						
Sampled Date	Mar 01, 2024 10:37 AM						
Sample Description	Surface Water						
Location	บริเวณจุดตรวจน้ำทิ้งของโรงงาน(W2)						
Date Analysis Commenced	Mar 01, 2024						
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							
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision F	Bangkok
^(A) Nickel	mg/L	0.0003	0.0005	0.02	≤0.1	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Selenium	mg/L	0.0003	0.0005	<0.0005	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Zinc	mg/L	0.003	0.005	0.13	≤1	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	3300.0	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
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, 23rd ed., 2017, part 4500-NH3 (F)	Rayong
BOD *	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and	Rayong

Approved by

Dej Changchon
Senior Manager



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930989-1

Page 3 of 4

Sample Number	2422835-2						
Sampled Date	Mar 01, 2024 10:37 AM						
Sample Description	Surface Water						
Location	บริเวณจุดตรวจน้ำทิ้งของโรงงาน(W2)						
Date Analysis Commenced	Mar 01, 2024						
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							
Dissolved Oxygen *	mg/L	-	0.1	4.8	≥2	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Nitrate as N *	mg/L	0.015	0.05	1.35	≤5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Oil & Grease *	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.6	5.0-9.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	35.0	n ^a	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1490	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	333	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	16	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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

Approved by

Dej Changchon
Senior Manager



Analysis / Test Report



Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930989-1

Page 4 of 4

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.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report 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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D. Chongchon
Dej Chongchon
Senior Manager

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479-352 (B&L)

3 (Reports), AL (L), RL (R) (E 139H)



Analysis / Test Report



Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930990-1

Page 2 of 4

Sample Number	2422835-3						
Sampled Date	Mar 01, 2024 11:35 AM						
Sample Description	Surface Water						
Location	บริเวณแหล่งน้ำประปาหมู่บ้านคลองระดม(W3)						
Date Analysis Commenced	Mar 01, 2024						
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							
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Nickel	mg/L	0.0003	0.0005	0.02	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	0.0006	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.12	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	49000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	5.6	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - O (C)	Rayong

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Senior Manager

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479-352 (B&L)

3 (Reports), AL (L), RL (R) (E 139H)



Analysis / Test Report



Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930990-1

Page 1 of 4

Sample Number	2422835-3						
Sampled Date	Mar 01, 2024 11:35 AM						
Sample Description	Surface Water						
Location	บริเวณแหล่งน้ำประปาหมู่บ้านคลองระดม(ว3)						
Date Analysis Commenced	Mar 01, 2024						
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	0.007	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
A Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
A Copper	mg/L	0.0003	0.0005	0.004	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
A Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
A Iron	mg/L	0.003	0.005	1.27	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
A Lead	mg/L	0.0003	0.0005	0.0006	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
A Manganese	mg/L	0.0003	0.0005	0.64	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Dej Chongchon
Senior Manager

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479-352 (B&L)

3 (Reports), AL (L), RL (R) (E 139H)



Analysis / Test Report



Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930990-1

Page 3 of 4

Page 3 of 8

Sample Number	2422835-3						
Sampled Date	Mar 01, 2024 11:35 AM						
Sample Description	Surface Water						
Location	บริเวณแหล่งน้ำประปาหมู่บ้านคลองระดม(W3)						
Date Analysis Commenced	Mar 01, 2024						
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							
Nitrate as N *	mg/L	0.015	0.05	1.68	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Oil & Grease *	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.7	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	35.0	n ^o	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1700	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	484	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	39	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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)

Sampling By : Wanlop Hunchainaw , Pattarapol Sawangjaitam

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

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D. Chongchon
Dej Chongchon
Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdeang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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479-352 (B&L)

3 (Reports), AL (L), RL (R) (E 139H)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930990-1

Page 4 of 4

- 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, ISO Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
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P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930990-2

Page 1 of 1

Sample Number	2422835-3						
Sampled Date	Mar 01, 2024 11:35 AM						
Sample Description	Surface Water						
Location	พื้นที่บริเวณทางระบายน้ำทิ้งของโรงงาน(W3)						
Date Analysis Commenced	Mar 01, 2024						
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	0.02	0.05	0.58	≤0.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, 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
Sampling By : Wanlop Hunchaisow , Pattarapol Sawangiatam

Remark :
LOD : Limit of Detection
LOQ : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Dej Changchon
Senior Manager

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479-0212 (BKK)

5 (Vientiane), AL GL (V) 6 (14TH)

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479-0212 (BKK)

5 (Vientiane), AL GL (V) 6 (14TH)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930991-1

Page 1 of 4

Sample Number	2422835-4
Sampled Date	Mar 01, 2024 11:47 AM
Sample Description	Surface Water
Location	พื้นที่บริเวณทางระบายน้ำทิ้งของโรงงาน(W4)
Date Analysis Commenced	Mar 01, 2024
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, a lot of solid and turbid

[A] Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.008	≤0.01	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Cadmium	mg/L	0.0003	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Copper	mg/L	0.0003	0.0005	0.005	≤0.1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
[A] Iron	mg/L	0.003	0.005	0.84	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Lead	mg/L	0.0003	0.0005	0.001	≤0.05	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Manganese	mg/L	0.0003	0.0005	0.36	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Senior Manager

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479-0212 (BKK)

5 (Vientiane), AL GL (V) 6 (14TH)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930991-1

Page 2 of 4

Sample Number	2422835-4
Sample Date	Mar 01, 2024 11:47 AM
Sample Description	Surface Water
Location	พื้นที่บริเวณทางระบายน้ำทิ้งของโรงงาน(W4)
Date Analysis Commenced	Mar 01, 2024
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, a lot of solid and turbid

[A] Metals Testing							
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002; EPA Method 1631, Revision E	Bangkok
[A] Nickel	mg/L	0.0003	0.0005	0.02	≤0.1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Selenium	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Zinc	mg/L	0.003	0.005	0.19	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Microbiological Testing							
Total Coliform	MPN/100mL	-	-	13000.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, 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, 23rd ed., 2017, part 4500 - O (C)	Rayong

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479-0212 (BKK)

5 (Vientiane), AL GL (V) 6 (14TH)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE



TESTING

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930991-1

Page 3 of 4

Sample Number	2422835-4						
Sampled Date	Mar 01, 2024 11:47 AM						
Sample Description	Surface Water						
Location	บริเวณแหล่งน้ำภายใน(W4)						
Date Analysis Commenced	Mar 01, 2024						
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, a lot of 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	4.80	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO ₃ (E)	Rayong
Oil & Grease *	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.3	5.0-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	35.2	n ¹	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	7300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO ₃ *	mg/L	-	1	1411	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2340 D	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	60	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, 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)
n¹: Change from Natural condition not more than 3 degree C
Sampling By : Wanlop Hunchanaow , Pattarapol Sawangjiam

Remark :
LOD : Limit of Detection
"C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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D. Chanchong
Dej Chanchong
Senior Manager

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479-1512 (BHL)

5 (Shenoi)_AF_IL-01 (6-14RM)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930991-2

Page 1 of 1

Sample Number	2422835-4						
Sampled Date	Mar 01, 2024 11:47 AM						
Sample Description	Surface Water						
Location	บริเวณแหล่งน้ำภายใน(W4)						
Date Analysis Commenced	Mar 01, 2024						
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, a lot of solid and turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.02	0.05	0.56	≤0.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH ₃ (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)
n¹: Change from Natural condition not more than 3 degree C
Sampling By : Wanlop Hunchanaow , Pattarapol Sawangjiam

Remark :
LOD : Limit of Detection
"C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Approved by

D. Chanchong
Dej Chanchong
Senior Manager

ADDRESS 616/10 Moo 5 T. Mueang Khui A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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Life Sciences
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479-1512 (BHL)

5 (Shenoi)_AF_IL-01 (6-14RM)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE



TESTING

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930991-1

Page 6 of 6

Analysis(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, DSE Accreditation No. 0009.
The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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D. Chanchong
Dej Chanchong
Senior Manager

ADDRESS 616/10 Moo 5 T. Mueang Khui A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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Life Sciences
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479-1512 (BHL)

5 (Shenoi)_AF_IL-01 (6-14RM)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930992-1

Page 1 of 4

Sample Number	2422835-5						
Sampled Date	Mar 01, 2024 11:17 AM						
Sample Description	Surface Water						
Location	บริเวณแหล่งน้ำภายใน W1 (W0/1)*						
Date Analysis Commenced	Mar 01, 2024						
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							
⁽¹⁾ Arsenic	mg/L	0.0003	0.0005	0.003	≤0.01	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
⁽¹⁾ Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
⁽¹⁾ Copper	mg/L	0.0003	0.0005	0.0009	≤0.1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
⁽¹⁾ Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3300 Cr 6	Bangkok
⁽¹⁾ Iron	mg/L	0.003	0.005	2.59	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
⁽¹⁾ Lead	mg/L	0.0003	0.0005	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
⁽¹⁾ Manganese	mg/L	0.0003	0.0005	0.54	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok



Analysis / Test Report



TESTING
No 0042

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930992-1

Page 2 of 4

Sample Number	2422835-5						
Sampled Date	Mar 01, 2024 11:17 AM						
Sample Description	Surface Water						
Location	บริเวณคลองชลประทาน W1 (W01/2)*						
Date Analysis Commenced	Mar 01, 2024						
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							
(A) Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
(A) Nickel	mg/L	0.0003	0.0005	0.0008	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Selenium	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Zinc	mg/L	0.003	0.005	0.02	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
(A) Total Coliform	MPN/100mL	-	-	1100.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	6.3	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - O (C)	Rayong

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Dej Changchong
Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A, Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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Analysis / Test Report



TESTING
No 0042

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930992-1

Page 3 of 4

Sample Number	2422835-5						
Sampled Date	Mar 01, 2024 11:17 AM						
Sample Description	Surface Water						
Location	บริเวณคลองชลประทาน W1 (W01)*						
Date Analysis Commenced	Mar 01, 2024						
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							
Nitrate as N *	mg/L	0.015	0.05	0.85	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Oil & Grease *	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3520 B	Rayong
pH at 25 degree C	-	-	-	7.1	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3520 B	Rayong
Temperature *	Degree C	-	-	35.3	n ¹	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	186	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	242	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, 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)

n¹: Change from Natural condition not more than 3 degree C
Sampling By : Wanlop Hunchainaw , Pattarapol Sawangaitam
Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Approved by

Dej Changchong
Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A, Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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Analysis / Test Report



TESTING
No.0042

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930992-1

Page 4 of 4

* 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. 6009.
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Analysis / Test Report



TESTING
No.0042

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930992-2

Page 1 of 1

Sample Number	2422835-5						
Sampled Date	Mar 01, 2024 11:17 AM						
Sample Description	Surface Water						
Location	บริเวณคลองชลประทาน W1 (W01)*						
Date Analysis Commenced	Mar 01, 2024						
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	0.02	0.05	1.27	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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)

n¹: Change from Natural condition not more than 3 degree C
Sampling By : Wanlop Hunchainaw , Pattarapol Sawangaitam
Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Dej Changchong
Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A, Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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Analysis / Test Report



TESTING
No 0042

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930993-1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 1 of 4

Sample Number	2422835-6						
Sampled Date	Mar 01, 2024 11:02 AM						
Sample Description	Surface Water						
Location	บริเวณคลองน้ำใน W1 (W0/2)*						
Date Analysis Commenced	Mar 01, 2024						
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	0.010	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.002	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Iron	mg/L	0.003	0.005	2.54	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	0.0009	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.78	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Dej Changchon
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5 (Weight), At CL (pt) (± 0.001%)



Analysis / Test Report



TESTING
No 0042

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 2 of 4

Page 2 of 4

Sample Number	2422835-6						
Sampled Date	Mar 01, 2024 11:02 AM						
Sample Description	Surface Water						
Location	บริเวณคลองน้ำใน W1 (W0/2)*						
Date Analysis Commenced	Mar 01, 2024						
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							
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Ni ²⁺ Nickel	mg/L	0.0003	0.0005	0.001	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Se ²⁺ Selenium	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zn ²⁺ Zinc	mg/L	0.003	0.005	0.03	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	7000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.43	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO ₃ (F)	Rayong
BOD *	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O C	Rayong

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5 (Weight), At CL (pt) (± 0.001%)



Analysis / Test Report



TESTING
No 0042

Lot ID: 2422835
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2930993-1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 3 of 4

Page 3 of 3

Sample Number	2422835-6						
Sampled Date	Mar 01, 2024 11:02 AM						
Sample Description	Surface Water						
Location	บริเวณคลองน้ำใน W1 (W0/2)*						
Date Analysis Commenced	Mar 01, 2024						
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							
Dissolved Oxygen *	mg/L	-	0.1	5.2	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Nitrate as N *	mg/L	0.015	0.05	0.87	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Oil & Grease *	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.4	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	35.1	n ^a	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2530 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	220	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO ₃ *	mg/L	-	1	323	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, 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 29, B.E. 2537 (Class 4)
n^a: Change from Natural condition not more than 3 degree C

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5 (Weight), At CL (pt) (± 0.001%)



Analysis / Test Report



TESTING
No 0042

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Page 4 of 4

Page 4 of 4

Sampling By : Wanlop Huchainasow , Pattarapol Sawangjiam

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.
[A] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, DSS Accreditation No. 0009.
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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 29, B.E. 2537 (Class 4)
n^a: Change from Natural condition not more than 3 degree C

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Dej Changchon
Senior Manager

ADDRESS 616/10 Moo 5 T. Muenam Khu A Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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479-12U (B&L)

RIGHT SOLUTIONS RIGHT PARTNER

5 (Weight), At CL (pt) (± 0.001%)



Analysis / Test Report



TESTING
No.0042

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019617-1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Page 1 of 4

Sample Number	2461281-1
Sampled Date	Jun 03, 2024 10:00 AM
Sample Description	Surface Water
Location	บริเวณคลองไหลลงสู่ทะเลสาบอ่าวต๋อง (W1)
Date Analysis Commenced	Jun 03, 2024
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
^(A) Arsenic	mg/L	0.0003	0.0005	0.008	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Copper	mg/L	0.0003	0.0005	0.0005	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
^(A) Iron	mg/L	0.003	0.005	2.54	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Manganese	mg/L	0.0003	0.0005	0.28	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Dej Changchon
Senior Manager

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RIGHT SOLUTIONS. RIGHT PARTNERS.
479-102 EMAIL: S. (Report) AL (L) (P) (E) (SPM)



Analysis / Test Report



TESTING
No.0042

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019617-1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Page 2 of 4

Sample Number	2461281-1
Sampled Date	Jun 03, 2024 10:00 AM
Sample Description	Surface Water
Location	บริเวณคลองไหลลงสู่ทะเลสาบอ่าวต๋อง (W1)
Date Analysis Commenced	Jun 03, 2024
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
^(A) Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method - STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
^(A) Nickel	mg/L	0.0003	0.0005	0.001	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Selenium	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Zinc	mg/L	0.003	0.005	0.02	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
^(A) Total Coliform	MPN/100mL	-	-	4900.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	5.6	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-D (C)	Rayong

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Approved by

Dej Changchon
Senior Manager

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479-102 EMAIL: S. (Report) AL (L) (P) (E) (SPM)



Analysis / Test Report



TESTING
No.0042

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019617-1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Page 3 of 4

Sample Number	2461281-1
Sampled Date	Jun 03, 2024 10:00 AM
Sample Description	Surface Water
Location	บริเวณคลองไหลลงสู่ทะเลสาบอ่าวต๋อง (W1)
Date Analysis Commenced	Jun 03, 2024
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
Nitrate as N *	mg/L	0.015	0.05	0.43	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO ₃ (E)	Rayong
Oil & Grease *	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.6	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.8	n	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	182	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO ₃ *	mg/L	-	1	96	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, 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 : Chainusorn Lerthanakulchai

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

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report 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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Dej Changchon
Senior Manager

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RIGHT SOLUTIONS. RIGHT PARTNERS.
479-102 EMAIL: S. (Report) AL (L) (P) (E) (SPM)



Analysis / Test Report



TESTING
No.0042

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019617-1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Page 4 of 4

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, PDS Accreditation No. 0069.
The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019617-2

Page 1 of 1

Sample Number	2461281-1						
Sampled Date	Jun 03, 2024 10:00 AM						
Sample Description	Surface Water						
Location	บริเวณจุดตรวจน้ำทิ้งของโรงงาน (W1)						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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	0.02	0.05	0.67	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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
Sampling By : Chainusorn Letnanthakunchai

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

Approved by

Dej Changchon
Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdeang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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3 (Reports) All (Lor) (1.539H)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019618-1

Page 1 of 4

Page 6 of 8

Sample Number	2461281-2						
Sampled Date	Jun 03, 2024 10:20 AM						
Sample Description	Surface Water						
Location	บริเวณจุดตรวจน้ำทิ้งของโรงงาน(W2)						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
^(A) Arsenic	mg/L	0.0003	0.0005	0.004	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Copper	mg/L	0.0003	0.0005	0.002	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
^(A) Iron	mg/L	0.003	0.005	0.39	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^(A) Manganese	mg/L	0.0003	0.0005	0.49	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Approved by

Dej Changchon
Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdeang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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479-12U-BML

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3 (Reports) All (Lor) (1.539H)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019618-1

Page 2 of 4

Sample Number	2461281-2						
Sampled Date	Jun 03, 2024 10:20 AM						
Sample Description	Surface Water						
Location	บริเวณจุดตรวจน้ำทิ้งของโรงงาน(W2)						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Nickel	mg/L	0.0003	0.0005	0.01	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	0.0007	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.09	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	1700.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.36	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (F)	Rayong
BOD *	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and	Rayong

Approved by

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Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdeang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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3 (Reports) All (Lor) (1.539H)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019618-1

Page 3 of 4

Page 3 of 4

Sample Number	2461281-2						
Sampled Date	Jun 03, 2024 10:20 AM						
Sample Description	Surface Water						
Location	บริเวณจุดตรวจน้ำทิ้งของโรงงาน(W2)						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
Dissolved Oxygen *	mg/L	-	0.1	5.0	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Nitrate as N *	mg/L	0.015	0.05	2.25	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Oil & Grease *	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C		-	-	8.6	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	34.7	n ^o	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1520	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	221	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, 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

Approved by

Dej Changchon
Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdeang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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479-12U-BML

RIGHT SOLUTIONS RIGHT PARTNER

3 (Reports) All (Lor) (1.539H)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019618-1

Sampling By : Chainusorn Lertnathalunchai

Page 4 of 4

Remark :
LOD : Limit of Detection
"C" : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
Analysis marked * 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.
The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report 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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Dej Changchon
Senior Manager

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479-1011 (ENG) S (Version) AL Group (E-SPM)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019619-1

Page 1 of 4

Sample Number 2461281-3
Sampled Date Jun 03, 2024 10:40 AM
Sample Description Surface Water
Location น้ำประปาหมู่บ้านทุ่งนาหว้าวังมะนาว(W3)
Date Analysis Commenced Jun 03, 2024
Condition of Sample Contained in two glass vials, one amber glass bottle, two BOD 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							
(H) Arsenic	mg/L	0.0003	0.0005	0.003	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Cadmium	mg/L	0.0003	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Copper	mg/L	0.0003	0.0005	0.002	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
(A) Iron	mg/L	0.003	0.005	0.89	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(H) Manganese	mg/L	0.0003	0.0005	0.31	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Dej Changchon
Senior Manager

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479-1011 (ENG) S (Version) AL Group (E-SPM)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019619-1

Page 2 of 4

Sample Number 2461281-3
Sampled Date Jun 03, 2024 10:40 AM
Sample Description Surface Water
Location น้ำประปาหมู่บ้านทุ่งนาหว้าวังมะนาว(W3)
Date Analysis Commenced Jun 03, 2024
Condition of Sample Contained in two glass vials, one amber glass bottle, two BOD 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							
(H) Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method - STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
(A) Nickel	mg/L	0.0003	0.0005	0.01	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Selenium	mg/L	0.0003	0.0005	0.0009	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Zinc	mg/L	0.003	0.005	0.08	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
(A) Total Coliform	MPN/100mL	-	-	33000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.29	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (F)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	4.8	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019619-1

Page 3 of 4

Sample Number 2461281-3
Sampled Date Jun 03, 2024 10:40 AM
Sample Description Surface Water
Location น้ำประปาหมู่บ้านทุ่งนาหว้าวังมะนาว(W3)
Date Analysis Commenced Jun 03, 2024
Condition of Sample Contained in two glass vials, one amber glass bottle, two BOD 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							
Nitrate as N *	mg/L	0.015	0.05	3.29	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Oil & Grease *	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.7	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	34.8	n	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	10700	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	3715	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	19	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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 : Chainusorn Lertnathalunchai

Remark :
LOD : Limit of Detection
"C" : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)

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Dej Changchon
Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019619-1

Page 4 of 4

- Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report 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.
- Analyst(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, DSE Accreditation No. 9009.
The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Rayong Thailand 21150
P/O :
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2466630
Date Received : Jun 14, 2024
Date Reported : Jun 20, 2024
Report Number : 3021725-1

Page 1 of 1

Sample Number 2466630-1
Sampled Date Jun 14, 2024 3:10 PM
Sample Description Surface Water
Location กรุงเทพมหานครบางกอกน้อยเขตบางกอกน้อย(W3)
Date Analysis Commenced Jun 15, 2024
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
Water Testing							
BOD	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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 : Surawit Narapong

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

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report 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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Senior Manager

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3 (Reports), All GL (pt) (0.03PH)

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Wiliwan Borirak
Manager

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3 (Reports), All GL (pt) (0.03PH)



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019620-1

Page 1 of 3

Sample Number 2461281-4
Sampled Date Jun 03, 2024 10:50 AM
Sample Description Surface Water
Location กรุงเทพมหานครบางกอกน้อยเขตบางกอกน้อย(W4)
Date Analysis Commenced Jun 03, 2024
Condition of Sample Contained in two glass vials, one amber glass bottle, two BOD 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							
^[A] Arsenic	mg/L	0.0003	0.0005	0.005	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^[A] Cadmium	mg/L	0.0003	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^[A] Copper	mg/L	0.0003	0.0005	0.003	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-C B	Bangkok
^[A] Iron	mg/L	0.003	0.005	0.59	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^[A] Manganese	mg/L	0.0003	0.0005	0.22	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No. 0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019620-1

Page 2 of 3

Sample Number 2461281-4
Sampled Date Jun 03, 2024 10:50 AM
Sample Description Surface Water
Location กรุงเทพมหานครบางกอกน้อยเขตบางกอกน้อย(W4)
Date Analysis Commenced Jun 03, 2024
Condition of Sample Contained in two glass vials, one amber glass bottle, two BOD 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							
^[A] Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
^[A] Nickel	mg/L	0.0003	0.0005	0.02	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^[A] Selenium	mg/L	0.0003	0.0005	0.0008	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
^[A] Zinc	mg/L	0.003	0.005	0.14	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
^[A] Total Coliform	MPN/100mL	-	-	2200.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, 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, 23rd ed., 2017, part 4500-O (C)	Rayong

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Analysis / Test Report



TESTING

No.0042

Lot ID: 2461281

Date Received : Jun 03, 2024

Date Reported : Jun 10, 2024

Report Number : 3019620-1

Page 3 of 3

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Sample Number	2461281-4						
Sampled Date	Jun 03, 2024 10:50 AM						
Sample Description	Surface Water						
Location	บริเวณคลองน้ำออกของโรงงาน(W4)						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
Oil & Grease	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.3	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	35.1	n ¹	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	8040	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	1807	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	53	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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)

n¹: Change from Natural condition not more than 3 degree C

Sampling By : Chainorn Lertnankhunchai

Remark:

- LOD : Limit of Detection

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

Analyst(s) marked * before 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.

The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of the report 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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5 Phrakdaeng Rd. Rayong (E.50M)



Analysis / Test Report

Lot ID: 2461281

Date Received : Jun 03, 2024

Date Reported : Jun 10, 2024

Report Number : 3019620-2

Page 1 of 1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Sample Number	2461281-4						
Sampled Date	Jun 03, 2024 10:50 AM						
Sample Description	Surface Water						
Location	บริเวณคลองน้ำออกของโรงงาน(W4)						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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	0.02	0.05	0.56	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (F)	Rayong
Nitrate as N	mg/L	0.015	0.05	8.93	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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)

n¹: Change from Natural condition not more than 3 degree C

Sampling By : Chainorn Lertnankhunchai

Remark:

- LOD : Limit of Detection

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

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5 Phrakdaeng Rd. Rayong (E.50M)



Analysis / Test Report



TESTING

No.0042

Lot ID: 2461281

Date Received : Jun 03, 2024

Date Reported : Jun 10, 2024

Report Number : 3019621-1

Page 1 of 4

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Sample Number	2461281-5						
Sampled Date	Jun 03, 2024 9:40 AM						
Sample Description	Surface Water						
Location	บริเวณคลองน้ำออก W1 (W0/1)*						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.0008	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Iron	mg/L	0.003	0.005	1.58	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.80	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Dej Changchon

Senior Manager

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5 Phrakdaeng Rd. Rayong (E.50M)



Analysis / Test Report

Lot ID: 2461281

Date Received : Jun 03, 2024

Date Reported : Jun 10, 2024

Report Number : 3019621-2

Page 2 of 4

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Sample Number	2461281-5						
Sampled Date	Jun 03, 2024 9:40 AM						
Sample Description	Surface Water						
Location	บริเวณคลองน้ำออก W1 (W0/1)*						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
[A] Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
[A] Nickel	mg/L	0.0003	0.0005	0.0008	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Selenium	mg/L	0.0003	0.0005	<0.0005	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
[A] Zinc	mg/L	0.003	0.005	0.02	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
[A] Total Coliform	MPN/100mL	-	-	790.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	5.3	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

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Dej Changchon

Senior Manager

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5 Phrakdaeng Rd. Rayong (E.50M)



Analysis / Test Report



Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019621-1

Page 3 of 4

Sample Number	2461281-5						
Sampled Date	Jun 03, 2024 9:40 AM						
Sample Description	Surface Water						
Location	บริเวณหนองน้ำภายใน W1 (W0/1)*						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
Nitrate as N *	mg/L	0.015	0.05	0.55	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Oil & Grease	mg/L	-	3	≤3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.4	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.7	n	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	172	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	341	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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 : Chainorn Lertnathakunchai

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

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Senior Manager

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Analysis / Test Report



Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019621-1

Page 4 of 4

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, OES Accreditation No. 0009.
The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Sample Number	2461281-6						
Sampled Date	Jun 03, 2024 9:50 AM						
Sample Description	Surface Water						
Location	บริเวณหนองน้ำภายใน W1 (W0/2)*						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
(A) Arsenic	mg/L	0.0003	0.0005	0.006	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Copper	mg/L	0.0003	0.0005	0.0006	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
(A) Iron	mg/L	0.003	0.005	0.82	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Manganese	mg/L	0.0003	0.0005	0.16	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Notification of the 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 : Chainorn Lertnathakunchai

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Senior Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019621-2

Page 1 of 1

Sample Number	2461281-5							Page 1 of 1
Sampled Date	Jun 03, 2024 9:40 AM							
Sample Description	Surface Water							
Location	บริเวณหนองน้ำภายใน W1 (W0/1)*							
Date Analysis Commenced	Jun 03, 2024							
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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	0.02	0.05	1.60	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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)
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Sampling By : Chainorn Lertnathakunchai

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Analysis / Test Report



Client : WHA Eastern Industrial Estate Co., Ltd.
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P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019621-2

Page 1 of 4

Page 1 of 4

Sample Number	2461281-6						
Sampled Date	Jun 03, 2024 9:50 AM						
Sample Description	Surface Water						
Location	บริเวณหนองน้ำภายใน W1 (W0/2)*						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
(A) Arsenic	mg/L	0.0003	0.0005	0.006	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Copper	mg/L	0.0003	0.0005	0.0006	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
(A) Iron	mg/L	0.003	0.005	0.82	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(A) Manganese	mg/L	0.0003	0.0005	0.16	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Notification of the 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 : Chainorn Lertnathakunchai

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Analysis / Test Report



TESTING
No.0042

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019622-1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Page 2 of 4

Sample Number	2461281-6						
Sampled Date	Jun 03, 2024 9:50 AM						
Sample Description	Surface Water						
Location	พื้นที่รอบโรงงาน W1 (W0/2)*						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Ni	mg/L	0.0003	0.0005	0.002	≤0.1	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
N	mg/L	0.0003	0.0005	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
N	mg/L	0.003	0.005	0.006	≤1	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	33000.0	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	6.3	≥2	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

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Analysis / Test Report



TESTING
No.0042

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019622-1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Page 4 of 4

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.
The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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S (Version): AL GL-01 (S.50PM)



Analysis / Test Report



TESTING
No.0042

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019622-1

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Page 3 of 4

Sample Number	2461281-6						
Sampled Date	Jun 03, 2024 9:50 AM						
Sample Description	Surface Water						
Location	พื้นที่รอบโรงงาน W1 (W0/2)*						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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							
Nitrate as N *	mg/L	0.015	0.05	0.42	≤5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.6	5.0-9.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.7	n	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	158	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	171	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, 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 : Chainorn Lerthanakunchai

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

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Analysis / Test Report

Lot ID: 2461281
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3019622-2

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Page 1 of 1

Sample Number	2461281-6						
Sampled Date	Jun 03, 2024 9:50 AM						
Sample Description	Surface Water						
Location	พื้นที่รอบโรงงาน W1 (W0/2)*						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle, two BOD 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	0.02	0.05	0.51	≤0.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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

Sampling By : Chainorn Lerthanakunchai

Remark :
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ภาคผนวก ค-3

คุณภาพน้ำทะเล



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461257
Date Received : Jun 03, 2024
Date Reported : Jun 17, 2024
Report Number : 3007446-1

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Sample Number	2461257-1						
Sampled Date	Jun 03, 2024 2:00 PM						
Sample Description	Sea Water						
Location	บริเวณน้ำทะเลที่ระยะห่าง 500 เมตร จากปากคลองบางเบิด-คันชาย(S1)						
Date Analysis Commenced	Jun 04, 2024						
Condition of Sample	Contained in four glass vials, three amber glass bottles and three 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	0.002	0.005	<0.005	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0009	0.003	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.001	0.003	Not Detected	≤0.008	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Iron	mg/L	0.001	0.003	0.09	≤0.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Lead	mg/L	0.001	0.003	Not Detected	≤0.0085	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.001	0.003	0.007	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Siriluk P.

Siriluk Bunnak
Section Head

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461257
Date Received : Jun 03, 2024
Date Reported : Jun 17, 2024
Report Number : 3007446-1

Page 2 of 12

Sample Number	2461257-1						
Sampled Date	Jun 03, 2024 2:00 PM						
Sample Description	Sea Water						
Location	บริเวณน้ำทะเลที่ระยะห่าง 500 เมตร จากปากคลองบางเบิด-คันชาย(S1)						
Date Analysis Commenced	Jun 04, 2024						
Condition of Sample	Contained in four glass vials, three amber glass bottles and three 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							
Mercury	mg/L	0.000003	0.00005	<0.00005	≤0.0001	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Nickel	mg/L	0.003	0.01	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.003	0.01	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.001	0.003	0.007	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Petroleum Hydrocarbons							
Benzene	ug/L	-	-	0.00	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Diesel Range Hydrocarbon (C15-C28)	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
Ethylbenzene	ug/L	-	-	0.00	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Gasoline Range Hydrocarbons (C6-C9)	ug/L	-	-	0.0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok

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Section Head

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461257
Date Received : Jun 03, 2024
Date Reported : Jun 17, 2024
Report Number : 3007446-1

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Sample Number 2461257-1
Sampled Date Jun 03, 2024 2:00 PM
Sample Description Sea Water
Location บริเวณน้ำทะเลประมาณ 500 เมตร จากปากคลองบางเห็ด-ด่านซ้าย(S1)
Date Analysis Commenced Jun 04, 2024
Condition of Sample Contained in four glass vials, three amber glass bottles and three 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
Petroleum Hydrocarbons							
Heavy Oil Range Hydrocarbon (C29-C36)	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
Kerosene Range Hydrocarbon (C10-C14)	ug/L	-	-	2	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
Toluene	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
TPH C10-C14	ug/L	-	10	<10	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
TPH C15-C28	ug/L	-	50	<50	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
TPH C29-C36	ug/L	-	50	<50	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
TPH C6-C9	ug/L	-	20	<20	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Water Testing							
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.15	≤5		Bangkok

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Section Head

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P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461257
Date Received : Jun 03, 2024
Date Reported : Jun 17, 2024
Report Number : 3007446-1

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Sample Number 2461257-1
Sampled Date Jun 03, 2024 2:00 PM
Sample Description Sea Water
Location บริเวณน้ำทะเลประมาณ 500 เมตร จากปากคลองบางเห็ด-ด่านซ้าย(S1)
Date Analysis Commenced Jun 04, 2024
Condition of Sample Contained in four glass vials, three amber glass bottles and three 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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	32950	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Note : Petroleum Hydrocarbon analysis has been subcontracted to outsource lab.

Sampling By : Chainorn Lertnanthakunchai

Remark :

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

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Section Head

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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P/O : 54240022

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2461257

Date Received : Jun 03, 2024

Date Reported : Jun 17, 2024

Report Number : 3007446-1

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Sample Number	2461257-2						
Sampled Date	Jun 03, 2024 2:10 PM						
Sample Description	Sea Water						
Location	บริเวณน้ำทะเลประมาณ 500 เมตร จากปากคลองบางเบิด-ศรีกลาง(S2)						
Date Analysis Commenced	Jun 04, 2024						
Condition of Sample	Contained in four glass vials, three amber glass bottles and three 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	0.002	0.005	<0.005	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0009	0.003	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.001	0.003	Not Detected	≤0.008	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Iron	mg/L	0.001	0.003	0.09	≤0.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Lead	mg/L	0.001	0.003	Not Detected	≤0.0085	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.001	0.003	0.006	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Siriluk P.

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Section Head

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O : 54240022

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2461257

Date Received : Jun 03, 2024

Date Reported : Jun 17, 2024

Report Number : 3007446-1

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Sample Number	2461257-2						
Sampled Date	Jun 03, 2024 2:10 PM						
Sample Description	Sea Water						
Location	บริเวณน้ำทะเลประมาณ 500 เมตร จากปากคลองบางเบิด-ศรีกลาง(S2)						
Date Analysis Commenced	Jun 04, 2024						
Condition of Sample	Contained in four glass vials, three amber glass bottles and three 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							
Mercury	mg/L	0.000003	0.00005	<0.00005	≤0.0001	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Nickel	mg/L	0.003	0.01	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.003	0.01	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.001	0.003	0.006	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Petroleum Hydrocarbons							
Benzene	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Diesel Range Hydrocarbon (C15-C28)	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
Ethylbenzene	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Gasoline Range Hydrocarbons (C6-C9)	ug/L	-	-	0.0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok

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Siriluk Bunnak
Section Head

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461257
Date Received : Jun 03, 2024
Date Reported : Jun 17, 2024
Report Number : 3007446-1

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Sample Number	2461257-2						
Sampled Date	Jun 03, 2024 2:10 PM						
Sample Description	Sea Water						
Location	บริเวณน้ำทะเลประมาณ 500 เมตร จากปากคลองบางเบ็ด-ตรงกลาง(S2)						
Date Analysis Commenced	Jun 04, 2024						
Condition of Sample	Contained in four glass vials, three amber glass bottles and three 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
Petroleum Hydrocarbons							
Heavy Oil Range Hydrocarbon (C29-C36)	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
Kerosene Range Hydrocarbon (C10-C14)	ug/L	-	-	<2	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
Toluene	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
TPH C10-C14	ug/L	-	10	<10	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
TPH C15-C28	ug/L	-	50	<50	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
TPH C29-C36	ug/L	-	50	<50	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
TPH C6-C9	ug/L	-	20	<20	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Water Testing							
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.25	≤5		Bangkok

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Section Head

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461257
Date Received : Jun 03, 2024
Date Reported : Jun 17, 2024
Report Number : 3007446-1

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Sample Number	2461257-2						
Sampled Date	Jun 03, 2024 2:10 PM						
Sample Description	Sea Water						
Location	บริเวณน้ำทะเลประมาณ 500 เมตร จากปากคลองบางเบ็ด-ตรงกลาง(S2)						
Date Analysis Commenced	Jun 04, 2024						
Condition of Sample	Contained in four glass vials, three amber glass bottles and three 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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	33000	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)							
Note : Petroleum Hydrocarbon analysis has been subcontracted to outsource lab.							
Sampling By : Chainosorn Lertnanthakunchai							
Remark :							
- LOD : Limit of Detection							
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)							

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P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461257
Date Received : Jun 03, 2024
Date Reported : Jun 17, 2024
Report Number : 3007446-1

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Sample Number	2461257-3						
Sampled Date	Jun 03, 2024 2:15 PM						
Sample Description	Sea Water						
Location	บริเวณน้ำทะเลที่ระยะห่าง 500 เมตร จากปากคลองบางเบิด-ลำขนขว(53)						
Date Analysis Commenced	Jun 04, 2024						
Condition of Sample	Contained in four glass vials, three amber glass bottles and three 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	0.002	0.005	<0.005	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0009	0.003	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.001	0.003	Not Detected	≤0.008	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Iron	mg/L	0.001	0.003	0.21	≤0.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Lead	mg/L	0.001	0.003	Not Detected	≤0.0085	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.001	0.003	0.02	≤0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Analysis / Test Report

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P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE

Lot ID: 2461257
Date Received : Jun 03, 2024
Date Reported : Jun 17, 2024
Report Number : 3007446-1

Page 10 of 12

Sample Number	2461257-3						
Sampled Date	Jun 03, 2024 2:15 PM						
Sample Description	Sea Water						
Location	บริเวณน้ำทะเลที่ระยะห่าง 500 เมตร จากปากคลองบางเบิด-ลำขนขว(53)						
Date Analysis Commenced	Jun 04, 2024						
Condition of Sample	Contained in four glass vials, three amber glass bottles and three 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							
Mercury	mg/L	0.000003	0.00005	<0.00005	≤0.0001	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Nickel	mg/L	0.003	0.01	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.003	0.01	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.001	0.003	0.008	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Petroleum Hydrocarbons							
Benzene	ug/L	-	-	0.00	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Diesel Range Hydrocarbon (C15-C28)	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
Ethylbenzene	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Gasoline Range Hydrocarbons (C6-C9)	ug/L	-	-	0.0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Bunnak
Section Head

ADDRESS 104 Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O : 54240022

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2461257

Date Received : Jun 03, 2024

Date Reported : Jun 17, 2024

Report Number : 3007446-1

Page 11 of 12

Sample Number	2461257-3						
Sampled Date	Jun 03, 2024 2:15 PM						
Sample Description	Sea Water						
Location	บริเวณน้ำทะเลที่ระยะทาง 500 เมตร จากปากคลองบางเบิด-ตำบลขมิ้น(S3)						
Date Analysis Commenced	Jun 04, 2024						
Condition of Sample	Contained in four glass vials, three amber glass bottles and three 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
Petroleum Hydrocarbons							
Heavy Oil Range Hydrocarbon (C29-C36)	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
Kerosene Range Hydrocarbon (C10-C14)	ug/L	-	-	-2	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
Toluene	ug/L	-	-	0.00	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	-	-	0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
TPH C10-C14	ug/L	-	10	<10	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
TPH C15-C28	ug/L	-	50	<50	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
TPH C29-C36	ug/L	-	50	<50	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 3510 C and 8015 C	Bangkok
TPH C6-C9	ug/L	-	20	<20	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030B and 8260D	Bangkok
Water Testing							
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.14	≤5		Bangkok

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Siriluk P.

Siriluk Bunnak
Section Head

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O : 54240022

Project Name : Monitoring

Project Location : WHA EIE

Lot ID: 2461257

Date Received : Jun 03, 2024

Date Reported : Jun 17, 2024

Report Number : 3007446-1

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Sample Number

2461257-3

Sampled Date

Jun 03, 2024 2:15 PM

Sample Description

Sea Water

Location

บริเวณน้ำทะเลระยะห่าง 500 เมตร จากปากคลองบางเบิด-ตำบลขมิ้น(53)

Date Analysis Commenced

Jun 04, 2024

Condition of Sample

Contained in four glass vials, three amber glass bottles and three 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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	32700	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

Guideline :

Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Note :

Petroleum Hydrocarbon analysis has been subcontracted to outsource lab.

Sampling By :

Chainusorn Lertnanthakunchai

Remark :

- LOD : Limit of Detection

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

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0009
Lot ID: 2461284
Date Received : Jun 10, 2024
Date Reported : Jun 18, 2024
Report Number : 3007362-1

Page 1 of 8

Sample Number	2461284-1						
Sampled Date	Jun 08, 2024 1:10 PM						
Sample Description	Underground Water						
Location	บ่อน้ำใต้ดินบริเวณบ่อพักน้ำฝนแปลงที่2 (U1)						
Date Analysis Commenced	Jun 11, 2024						
Condition of Sample	Contained in two plastic bottles, two glass vials, two vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Colorless, odourless, no solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.003	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	<0.0005	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Iron	mg/L	0.003	0.005	0.07	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	<0.0005	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.13	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Approved by

Sawitree N.

Sawitree Noisangiam
Manager

ADDRESS 104 Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0009
Lot ID: 2461284
Date Received : Jun 10, 2024
Date Reported : Jun 18, 2024
Report Number : 3007362-1

Page 2 of 8

Sample Number	2461284-1						
Sampled Date	Jun 08, 2024 1:10 PM						
Sample Description	Underground Water						
Location	บ่อน้ำใต้ดินบริเวณบ่อพักน้ำฝนแปลงที่2 (U1)						
Date Analysis Commenced	Jun 11, 2024						
Condition of Sample	Contained in two plastic bottles, two glass vials, two vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Colorless, odourless, no solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.001	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Nickel	mg/L	0.0003	0.0005	0.004	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.17	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Volatile Organics Compounds							
1,1,1,2-Tetrachloroethane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,1,1-Trichloroethane	ug/L	0.08	0.5	Not Detected	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,1,2,2-Tetrachloroethane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,1,2-Trichloroethane	ug/L	0.08	0.5	Not Detected	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok

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Approved by

Sawitree N.

Sawitree Noisangiam
Manager

ADDRESS 104 Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O : 54240022

Project Name : Monitoring

Project Location : WHA EIE

Sample Number 2461284-1
Sampled Date Jun 08, 2024 1:10 PM
Sample Description Underground Water
Location บ่อน้ำใต้ดินบริเวณบ่อพักน้ำฝนเฟสที่2 (U1)
Date Analysis Commenced Jun 11, 2024
Condition of Sample Contained in two plastic bottles, two glass vials, two vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Colorless, odourless, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
1,1-Dichloroethane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,1-Dichloroethene	ug/L	0.11	0.5	Not Detected	≤7	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,1-Dichloropropene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,2,3-Trichlorobenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,2,3-Trichloropropane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,2,4-Trichlorobenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,2,4-Trimethylbenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,2-Dibromo-3-chloropropane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,2-Dibromoethane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok

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Approved by

Savitree N.

Savitree Noisangiam
Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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TESTING
No.0009

Lot ID: 2461284

Date Received : Jun 10, 2024

Date Reported : Jun 18, 2024

Report Number : 3007362-1

Page 3 of 8



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O : 54240022

Project Name : Monitoring

Project Location : WHA EIE

Sample Number 2461284-1
Sampled Date Jun 08, 2024 1:10 PM
Sample Description Underground Water
Location บ่อน้ำใต้ดินบริเวณบ่อพักน้ำฝนเฟสที่2 (U1)
Date Analysis Commenced Jun 11, 2024
Condition of Sample Contained in two plastic bottles, two glass vials, two vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Colorless, odourless, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
1,2-Dichlorobenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,2-Dichloroethane	ug/L	0.07	0.5	Not Detected	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,2-Dichloropropane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,3,5-Trimethylbenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,3-Dichlorobenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,3-Dichloropropane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
1,4-Dichlorobenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
2,2-Dichloropropane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
2-Chlorotoluene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok

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Savitree N.

Savitree Noisangiam
Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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TESTING
No.0009

Lot ID: 2461284

Date Received : Jun 10, 2024

Date Reported : Jun 18, 2024

Report Number : 3007362-1

Page 4 of 8



Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0009

Lot ID: 2461284
Date Received : Jun 10, 2024
Date Reported : Jun 18, 2024
Report Number : 3007362-1

Page 5 of 8

Sample Number	2461284-1						
Sampled Date	Jun 08, 2024 1:10 PM						
Sample Description	Underground Water						
Location	บ่อน้ำใต้ดินบริเวณพลกั๊กบ้านหนองฝู2 (U1)						
Date Analysis Commenced	Jun 11, 2024						
Condition of Sample	Contained in two plastic bottles, two glass vials, two vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Colorless, odourless, no solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
4-Chlorotoluene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
4-Isopropyltoluene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Benzene	ug/L	0.03	0.5	Not Detected	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Bromobenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Bromochloromethane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Bromodichloromethane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Bromoform *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Carbon tetrachloride	ug/L	0.08	0.5	Not Detected	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Chlorobenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok

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Sawitree N.

Sawitree Noisangiam
Manager

ADDRESS 104 Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
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P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0009

Lot ID: 2461284
Date Received : Jun 10, 2024
Date Reported : Jun 18, 2024
Report Number : 3007362-1

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Sample Number	2461284-1						
Sampled Date	Jun 08, 2024 1:10 PM						
Sample Description	Underground Water						
Location	บ่อน้ำใต้ดินบริเวณพลกั๊กบ้านหนองฝู2 (U1)						
Date Analysis Commenced	Jun 11, 2024						
Condition of Sample	Contained in two plastic bottles, two glass vials, two vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Colorless, odourless, no solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
Chloroform *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Chloromethane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
cis-1,2-Dichloroethene *	ug/L	0.04	0.5	Not Detected	≤70	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
cis-1,3-Dichloropropene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Dibromochloromethane *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Dibromomethane *	ug/L	0.10	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Ethylbenzene	ug/L	0.03	0.5	Not Detected	≤700	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Hexachlorobutadiene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Isopropylbenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok

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Approved by

Sawitree N.

Sawitree Noisangiam
Manager

ADDRESS 104 Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0009
Lot ID: 2461284
Date Received : Jun 10, 2024
Date Reported : Jun 18, 2024
Report Number : 3007362-1

Page 7 of 8

Sample Number 2461284-1
Sampled Date Jun 08, 2024 1:10 PM
Sample Description Underground Water
Location บ่อน้ำใต้ดินบริเวณบ่อพักน้ำฝนแฟงฟ2 (U1)
Date Analysis Commenced Jun 11, 2024
Condition of Sample Contained in two plastic bottles, two glass vials, two vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Colorless, odourless, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
m,p-Xylene	ug/L	0.3	1.0	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	0.1	0.5	Not Detected	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Naphthalene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
n-Butylbenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
n-Propylbenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
o-Xylene	ug/L	0.01	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
sec-Butylbenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Styrene	ug/L	0.02	0.5	Not Detected	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
tert-Butylbenzene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok

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Approved by

Savitree N.

Savitree Noisangiam
Manager

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Analysis / Test Report

Client : WHA Eastern Industrial Estate Co., Ltd.
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O : 54240022
Project Name : Monitoring
Project Location : WHA EIE



TESTING
No.0009
Lot ID: 2461284
Date Received : Jun 10, 2024
Date Reported : Jun 18, 2024
Report Number : 3007362-1

Page 8 of 8

Sample Number 2461284-1
Sampled Date Jun 08, 2024 1:10 PM
Sample Description Underground Water
Location บ่อน้ำใต้ดินบริเวณบ่อพักน้ำฝนแฟงฟ2 (U1)
Date Analysis Commenced Jun 11, 2024
Condition of Sample Contained in two plastic bottles, two glass vials, two vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Colorless, odourless, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
Tetrachloroethene	ug/L	0.07	0.5	Not Detected	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Toluene	ug/L	0.04	0.5	Not Detected	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Total Xylene	ug/L	0.04	1.5	Not Detected	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
trans-1,2-Dichloroethene	ug/L	0.1	0.5	Not Detected	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
trans-1,3-Dichloropropene *	ug/L	0.15	0.5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Trichloroethene	ug/L	0.05	0.5	Not Detected	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok
Vinyl chloride (Chloroethylene)	ug/L	0.16	0.3	Not Detected	≤2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6200 B	Bangkok

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

Sampling By : Thanasoun Namakunna

Remark :

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Approved by

Savitree N.

Savitree Noisangiam
Manager

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ภาคผนวก ค-5

คุณลักษณะน้ำเสียก่อนเข้าและหลังออกจาก
ระบบบำบัดน้ำเสียส่วนกลาง



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 23139742
Date Received : Jan 08, 2024
Date Reported : Jan 16, 2024
Report Number : 2852403-1

Page 1 of 2

Sample Number	23139742-1						
Sampled Date	Jan 08, 2024 10:13 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Jan 08, 2024						
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	39.0	≤300	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	103	≤600	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	0.2	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed, 2004	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	6.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - C (F)	Rayong
Temperature *	Degree C	-	-	35.2	≤45	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1236	≤3000	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

Technical Management

N. Banongkit

Approved by

D. Chanchon

Nanumon Banongkit
Supervisor
โทรศัพท์ ๖-323-๙-9445

Dej Chanchon
Senior Manager
โทรศัพท์ ๖-323-๙-9442

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 23139742
Date Received : Jan 08, 2024
Date Reported : Jan 16, 2024
Report Number : 2852403-1

Page 2 of 2

Page 4 of 4

Sample Number	23139742-1						
Sampled Date	Jan 08, 2024 10:13 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Jan 08, 2024						
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							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	5.1	≤100	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part 4500-Norg (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	56	≤200	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Tanasit Wongsachal โทรศัพท์ ๖-323-๙-9460, Thanassun Namakunna โทรศัพท์ ๖-304-๙-8592

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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N. Banongkit

Approved by

D. Chanchon

Nanumon Banongkit
Supervisor
โทรศัพท์ ๖-323-๙-9445

Dej Chanchon
Senior Manager
โทรศัพท์ ๖-323-๙-9442

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Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0009
Lot ID: 23139742
Date Received : Jan 08, 2024
Date Reported : Jan 16, 2024
Report Number : 2852403-2

Page 1 of 2

Sample Number	23139742-1						
Sampled Date	Jan 08, 2024 10:13 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Jan 09, 2024						
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	0.005	≤0.25	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	0.01	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.02	≤2.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr 6	Bangkok
Lead	mg/L	0.0003	0.0005	0.001	≤0.2	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.10	≤5.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Savitree N.

Approved by

Kanokkorn Anek

Savitree Naisangiam
Manager
โทรศัพท์ ๖-204-๙-4709

Kanokkorn Anek
Senior Manager
โทรศัพท์ ๖-204-๙-6111

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkhroaj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0009
Lot ID: 23139742
Date Received : Jan 08, 2024
Date Reported : Jan 16, 2024
Report Number : 2852403-2

Page 2 of 2

Page 2 of 2

Sample Number	23139742-1						
Sampled Date	Jan 08, 2024 10:13 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Jan 09, 2024						
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							
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3132	Bangkok
Nickel	mg/L	0.0003	0.0005	0.01	≤1.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	<0.0005	≤0.02	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.40	≤5.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Tanasit Wongsachal โทรศัพท์ ๖-323-๙-9460, Thanassun Namakunna โทรศัพท์ ๖-304-๙-8592

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Technical Management

Savitree N.

Approved by

Kanokkorn Anek

Savitree Naisangiam
Manager
โทรศัพท์ ๖-204-๙-4709

Kanokkorn Anek
Senior Manager
โทรศัพท์ ๖-204-๙-6111

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Analysis / Test Report



TESTING

No.0009

Lot ID: 23139742

Date Received : Jan 08, 2024

Date Reported : Jan 16, 2024

Report Number : 2852403-3

Page 1 of 1

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 23139742-1
Sample Date Jan 08, 2024 10:13 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Jan 09, 2024
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							
Iron	mg/L	0.003	0.005	3.60	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Aromatic Surfactant as MBAS *	mg/L	0.015	0.05	0.06	≤30	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5540 B, C	Bangkok
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	2068	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2530 B	Rayong
Total Phosphorus as P *	mg/L	0.2	0.5	2.0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 365.4	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Tanasit Wongachai , Thanasout Namakurna

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Approved by

Surimon C.
Surimon Channangnuit
Scientist (3)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3107

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Analysis / Test Report



TESTING

No.0042

Lot ID: 2411083

Date Received : Feb 01, 2024

Date Reported : Feb 09, 2024

Report Number : 2897139-1

Page 2 of 2

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2411083-1
Sample Date Feb 01, 2024 10:46 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Feb 01, 2024
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 some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	7.1	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NHD (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	31	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Chayusorn Lertnanhachulchai โทรศัทพ์ 3-323-9-9461, Kerdbundit Kitisupparanit โทรศัทพ์ 3-204-4-0001

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

N. Banchookit

Nanumon Banchookit
Supervisor
โทรศัทพ์ 3-323-9-9445

Approved by

D. Chongchon

Dej Chongchon
Senior Manager
โทรศัทพ์ 3-323-9-9442

ADDRESS 616/10 Moo 5 T. Muenam Khu A, Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

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Analysis / Test Report



TESTING

No.0042

Lot ID: 2411083

Date Received : Feb 01, 2024

Date Reported : Feb 09, 2024

Report Number : 2897139-1

Page 1 of 2

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2411083-1
Sample Date Feb 01, 2024 10:46 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Feb 01, 2024
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 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	23.4	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	81	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤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, 23rd ed., 2017, 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, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	34.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1416	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

Technical Management

N. Banchookit

Nanumon Banchookit
Supervisor
โทรศัทพ์ 3-323-9-9445

Approved by

D. Chongchon

Dej Chongchon
Senior Manager
โทรศัทพ์ 3-323-9-9442

ADDRESS 616/10 Moo 5 T. Muenam Khu A, Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

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Analysis / Test Report



TESTING

No.0009

Lot ID: 2411083

Date Received : Feb 01, 2024

Date Reported : Feb 09, 2024

Report Number : 2897139-2

Page 1 of 2

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2411083-1
Sample Date Feb 01, 2024 10:46 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Feb 02, 2024
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 some 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, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	0.003	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.01	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.15	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Chanatt L.

Chanattang Jinchom
Section Head
โทรศัทพ์ 3-204-4-9710

Approved by

Kanokorn Anek

Kanokorn Anek
Senior Manager
โทรศัทพ์ 3-204-4-6111

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3107

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0009
Lot ID: 2411083
Date Received : Feb 01, 2024
Date Reported : Feb 09, 2024
Report Number : 2897139-2

Page 2 of 2

Sample Number	2411083-1						
Sampled Date	Feb 01, 2024 10:46 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Feb 02, 2024						
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 some turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.34	≤5.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Pu), 4th edition 2020, B.E. 2563

Sampling By : Chainorn Lertnanthakunchai รหัสประจำตัว >323-a-9461, Kardsundit Kitisupavant รหัสประจำตัว >204-a-0001

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

Chanatt L.

Chanattagarn Indhom
Section Head
รหัสประจำตัว >204-a-4710

Approved by

Kanokorn Anek

Kanokorn Anek
Senior Manager
รหัสประจำตัว >204-a-6111

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2420324
Date Received : Mar 01, 2024
Date Reported : Mar 06, 2024
Report Number : 2916720-1

Page 1 of 2

Page 1 of 2

Sample Number	2420324-1						
Sampled Date	Mar 01, 2024 11:59 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Mar 01, 2024						
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 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	23.4	≤300	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	66	≤600	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤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, 23rd ed., 2017, part 5220 B	Rayong
pH at 25 degree C	-	-	-	6.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - G (F)	Rayong
Temperature *	Degree C	-	-	39.2	≤45	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1180	≤3000	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

Technical Management

N. Banthit

Nanumon Banthongkit
Supervisor
รหัสประจำตัว >323-a-9445

Approved by

D. Chanchon

Dej Chanchon
Senior Manager
รหัสประจำตัว >323-a-9442

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0009
Lot ID: 2411083
Date Received : Feb 01, 2024
Date Reported : Feb 09, 2024
Report Number : 2897139-3

Page 1 of 1

Sample Number	2411083-1						
Sampled Date	Feb 01, 2024 10:46 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Feb 01, 2024						
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 some turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	2.26	≤10	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Anionic Surfactant as MBAS *	mg/L	0.015	0.05	0.06	≤30	Based on Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5540 B, C	Bangkok
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	2292	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Total Phosphorus as P *	mg/L	0.2	0.5	1.3	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 365.4	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Pu), 4th edition 2020, B.E. 2563

Sampling By : Chainorn Lertnanthakunchai รหัสประจำตัว >323-a-9461, Kardsundit Kitisupavant รหัสประจำตัว >204-a-0001

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.

Approved by

Summon C.

Summon Chairanvut
Scientist (3)

ADDRESS 104 Phatthanakan Rd., Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3197
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517-1312 (ENGL) 5 (Pages), AI, GL, pr (4.34PM)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2420324
Date Received : Mar 01, 2024
Date Reported : Mar 06, 2024
Report Number : 2916720-1

Page 2 of 2

Page 2 of 2

Sample Number	2420324-1						
Sampled Date	Mar 01, 2024 11:59 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Mar 01, 2024						
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 turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.6	≤100	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NHD (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	35	≤200	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Pu), 4th edition 2020, B.E. 2563

Sampling By : Surawit Narapong รหัสประจำตัว >323-a-0011, Thanassoon Namakuma รหัสประจำตัว >204-a-0101

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.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banthit

Nanumon Banthongkit
Supervisor
รหัสประจำตัว >323-a-9445

Approved by

D. Chanchon

Dej Chanchon
Senior Manager
รหัสประจำตัว >323-a-9442

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Analysis / Test Report



TESTING

No.0009

Lot ID: 2420324

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2916720-2

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Page 1 of 2

Sample Number	2420324-1						
Sampled Date	Mar 01, 2024 11:59 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Mar 04, 2024						
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 turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.007	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	0.008	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.01	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	0.0007	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.16	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Chanatt L.

Chanattagarn Inthom

Section Head

โทรศัพท์ 204-4-0008

Approved by

Kanokorn Anek

Kanokorn Anek

Senior Manager

โทรศัพท์ 204-4-0004

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517-121 (ENGL)



Analysis / Test Report



TESTING

No.0009

Lot ID: 2420324

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2916720-2

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Page 2 of 2

Sample Number	2420324-1						
Sampled Date	Mar 01, 2024 11:59 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Mar 04, 2024						
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 turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.14	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563							
Sampling By : Surawit Narapong โทรศัพท์ 204-4-0011, Thanassou Namakunna โทรศัพท์ 204-4-0010							
Remark :							
LOD : Limit of Detection							
< : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)							
Analysis(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

Chanatt L.

Chanattagarn Inthom

Section Head

โทรศัพท์ 204-4-0008

Approved by

Kanokorn Anek

Kanokorn Anek

Senior Manager

โทรศัพท์ 204-4-0004

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517-121 (ENGL)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Page 1 of 1

Sample Number	2420324-1						
Sampled Date	Mar 01, 2024 11:59 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Mar 01, 2024						
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 turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	2.66	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Anionic Surfactant as MBAS	mg/L	0.015	0.05	0.19	≤30	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5540 B, C	Bangkok
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1976	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Total Phosphorus as P	mg/L	0.2	0.5	<0.5	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 365.4	Bangkok
Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563							
Sampling By : Surawit Narapong , Thanassou Namakunna							
Remark :							
- LOD : Limit of Detection							
- < : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)							

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Approved by

N. Bangkhut

Narumon Bandongkhit

Supervisor

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Life Sciences

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517-121 (ENGL)



Analysis / Test Report



TESTING

No.0042

Lot ID: 2433957

Date Received : Apr 08, 2024

Date Reported : Apr 19, 2024

Report Number : 2946373-1

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Page 2 of 2

Sample Number	2433957-1						
Sampled Date	Apr 08, 2024 9:45 AM						
Sample Description	Influent						
Location	WHA EIE : Pumping Station						
Date Analysis Commenced	Apr 08, 2024						
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, 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	12.6	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	52	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	0.2	≤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, 23rd ed., 2017, part 5220 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, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - Cl (F)	Rayong
Temperature *	Degree C	-	-	37.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 2540 C	Rayong

Technical Management

Photchana S.

Photchana Seeda

Scientist (4)

โทรศัพท์ 2323-4-9446

Approved by

D. Khunon

Dej Chanchon

Senior Manager

โทรศัพท์ 2323-4-9442

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Life Sciences

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517-121 (ENGL)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No. 0042
Lot ID: 2433957
Date Received : Apr 06, 2024
Date Reported : Apr 19, 2024
Report Number : 2946373-1

Page 2 of 2

Sample Number 2433957-1
Sample Date Apr 08, 2024 9:45 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Apr 08, 2024
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, 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	2.0	≤100	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part 4413 (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, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Sansoen Khuyiksuai รหัสประจำตัว 3-323-0-0005, Thanasoun Namakunna รหัสประจำตัว 3-204-0-0101

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Photchanas S.

Photchanas Seeda
Scientist (4)
รหัสประจำตัว 3-323-0-9446

Approved by

Dej Changchon

Dej Changchon
Senior Manager
รหัสประจำตัว 3-323-0-9442

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No. 0009
Lot ID: 2433957
Date Received : Apr 08, 2024
Date Reported : Apr 19, 2024
Report Number : 2946373-2

Page 1 of 2

Sample Number 2433957-1
Sample Date Apr 08, 2024 9:45 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Apr 09, 2024
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, solid and 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	<0.0005	≤0.03	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	0.005	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.009	≤2.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.13	≤5.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Chanatt L.

Chanattagorn Inthom
Section Head
รหัสประจำตัว 3-204-0-0008

Approved by

Kanokorn Anek

Kanokorn Anek
Senior Manager
รหัสประจำตัว 3-204-0-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No. 0009
Lot ID: 2433957
Date Received : Apr 06, 2024
Date Reported : Apr 19, 2024
Report Number : 2946373-2

Page 2 of 2

Sample Number 2433957-1
Sample Date Apr 08, 2024 9:45 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Apr 09, 2024
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, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.010	≤1.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.39	≤5.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Sansoen Khuyiksuai รหัสประจำตัว 3-323-0-0005, Thanasoun Namakunna รหัสประจำตัว 3-204-0-0101

Remark :

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

Chanatt L.

Chanattagorn Inthom
Section Head
รหัสประจำตัว 3-204-0-0008

Approved by

Kanokorn Anek

Kanokorn Anek
Senior Manager
รหัสประจำตัว 3-204-0-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No. 0009
Lot ID: 2433957
Date Received : Apr 08, 2024
Date Reported : Apr 19, 2024
Report Number : 2946373-3

Page 1 of 1

Sample Number 2433957-1
Sample Date Apr 08, 2024 9:45 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Apr 09, 2024
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, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	1.46	≤10	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Anionic Surfactant as MBAS *	mg/L	0.015	0.05	0.08	≤30	Based on Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3540 B, C	Bangkok
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1818	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Total Phosphorus as P *	mg/L	0.2	0.5	1.3	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 365.4	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Sansoen Khuyiksuai, Thanasoun Namakunna

Remark :

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Technical Management

Chanatt L.

Chanattagorn Inthom
Section Head

Approved by

Chanatt L.

Chanattagorn Inthom
Section Head

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Analysis / Test Report



TESTING

No.0042

Lot ID: 2445968

Date Received : May 06, 2024

Date Reported : May 15, 2024

Report Number : 2973763-1

Client : WHA Utilities and Power Public Company Limited

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2445968-1
Sampled Date May 06, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced May 06, 2024
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	15.7	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	58	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	13	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	12	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤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, 23rd ed., 2017, part 5220 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, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - Cl (F)	Rayong
Temperature *	Degree C	-	-	38.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2530 B	Rayong

Technical Management

N. Banchohit

Nanumon Banchohit

Supervisor

โทรศัพท์ ๖-323-๙-9445

Approved by

D. Changchon

Dej Changchon

Senior Manager

โทรศัพท์ ๖-323-๙-9442

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Analysis / Test Report



TESTING

No.0042

Lot ID: 2445968

Date Received : May 06, 2024

Date Reported : May 15, 2024

Report Number : 2973763-1

Client : WHA Utilities and Power Public Company Limited

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2445968-1
Sampled Date May 06, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced May 06, 2024
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							
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1400	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	3.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NHI (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Sansoen Khuyokkai โทรศัพท์ ๖-323-๙-0005 , Thanassou Namakuma โทรศัพท์ ๖-204-๙-0101

Remark :

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

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Technical Management

N. Banchohit

Nanumon Banchohit

Supervisor

โทรศัพท์ ๖-323-๙-9445

Approved by

D. Changchon

Dej Changchon

Senior Manager

โทรศัพท์ ๖-323-๙-9442

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Analysis / Test Report



TESTING

No.0009

Lot ID: 2445968

Date Received : May 06, 2024

Date Reported : May 15, 2024

Report Number : 2973763-2

Client : WHA Utilities and Power Public Company Limited

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2445968-1
Sampled Date May 06, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced May 08, 2024
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	0.008	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	0.003	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.02	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.16	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Sawitree N.

Sawitree Naisangam

Manager

โทรศัพท์ ๖-204-๙-0007

Approved by

Kankom Anek

Kankom Anek

Senior Manager

โทรศัพท์ ๖-204-๙-0004

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S (Reports), M (CL), P (7-40AM)



Analysis / Test Report



TESTING

No.0009

Lot ID: 2445968

Date Received : May 06, 2024

Date Reported : May 15, 2024

Report Number : 2973763-2

Client : WHA Utilities and Power Public Company Limited

18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2445968-1
Sampled Date May 06, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced May 08, 2024
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							
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.007	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	<0.0005	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.34	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Sansoen Khuyokkai โทรศัพท์ ๖-323-๙-0005 , Thanassou Namakuma โทรศัพท์ ๖-204-๙-0101

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

Sawitree N.

Sawitree Naisangam

Manager

โทรศัพท์ ๖-204-๙-0007

Approved by

Kankom Anek

Kankom Anek

Senior Manager

โทรศัพท์ ๖-204-๙-0004

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Analysis / Test Report



Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0009
Lot ID: 2445968
Date Received : May 06, 2024
Date Reported : May 15, 2024
Report Number : 2973763-C-3

Page 1 of 1

Sample Number 2445968-1
Sampled Date May 06, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced May 07, 2024
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 (LOQ)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	1.39	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Anionic Surfactant as MBAS *	mg/L	0.015	0.05	0.06	≤30	Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5540 B, C	Bangkok
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	2232	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Total Phosphorus as P *	mg/L	0.2	0.5	1.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-P (B, E)	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563
Sampling By : Sansoen Khuyiksu, Thanasoun Namakunna

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

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Approved by

Savitree N.
Savitree Noisangiam
Manager

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Analysis / Test Report



Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0009
Lot ID: 2459569
Date Received : Jun 03, 2024
Date Reported : Jun 11, 2024
Report Number : 3003568-2

Page 1 of 4

Sample Number 2459569-1
Sampled Date Jun 03, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Jun 04, 2024
Condition of Sample Contained in one amber glass bottle and four 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 (LOQ)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Barium	mg/L	0.0003	0.0005	0.09	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Pesticides - Organochlorine Group							
2,4-DDO *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
2,4-DDE *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
2,4-DDT *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
4,4-DDO *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
4,4-DDE *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
4,4-DDT *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Technical Management

Chanatt L.
Chanattagorn Imchom
Section Head
โทรศัพท์ 2-204-0-0008

Approved by

Kanokorn Anek
Kanokorn Anek
Senior Manager
โทรศัพท์ 2-204-0-0004

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Analysis / Test Report



Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0042
Lot ID: 2459569
Date Received : Jun 03, 2024
Date Reported : Jun 11, 2024
Report Number : 3003568-1

Page 1 of 1

Sample Number 2459569-1
Sampled Date Jun 03, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Jun 04, 2024
Condition of Sample Contained in one amber glass bottle and four 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 (LOQ)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Cyanide as CN	mg/L	0.001	0.005	<0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Phenol	mg/L	0.005	0.01	0.59	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563
Sampling By : Sansoen Khuyiksu โทรศัพท์ 2-204-0-0005, Thanasoun Namakunna โทรศัพท์ 2-204-0-0101

Remark :
LOD : Limit of Detection
" < " : Lower than LOQ (Limit of Quantitation) / LOQ (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

Photchana S.
Photchana Seeda
Scientist (4)
โทรศัพท์ 2-223-9-9946

Approved by

Dej Changchon
Dej Changchon
Senior Manager
โทรศัพท์ 2-223-9-9942

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Analysis / Test Report



Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No.0009
Lot ID: 2459569
Date Received : Jun 03, 2024
Date Reported : Jun 11, 2024
Report Number : 3003568-2

Page 2 of 4

Sample Number 2459569-1
Sampled Date Jun 03, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Jun 04, 2024
Condition of Sample Contained in one amber glass bottle and four 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 (LOQ)	Result	Guideline / Specification	Method	Testing Location
Pesticides - Organochlorine Group							
Aldrin *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
alpha-BHC *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
beta-BHC *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Chlordane *	ug/L	0.02	0.04	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
delta-BHC *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Dieldrin *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Endosulfan I *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Technical Management

Chanatt L.
Chanattagorn Imchom
Section Head
โทรศัพท์ 2-204-0-0008

Approved by

Kanokorn Anek
Kanokorn Anek
Senior Manager
โทรศัพท์ 2-204-0-0004

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Analysis / Test Report



TESTING

No.0009

Lot ID: 2459569

Date Received : Jun 03, 2024

Date Reported : Jun 11, 2024

Report Number : 3003568-2

Client : WHA Utilities and Power Public Company Limited
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150P/O :
Project Name :
Project Location : WHA EIE

Sample Number 2459569-1
Sampled Date Jun 03, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Jun 04, 2024
Condition of Sample Contained in one amber glass bottle and four 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
Pesticides - Organochlorine Group							
Endosulfan II *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Endrin *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Heptachlor *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Heptachlor-Epoxide *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Lindane (gamma-BHC) *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Methoxychlor *	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Sansoen Khuyoksu วิเศษสุข, Thanassorn Namakunna นามะคุนนา

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

Technical Management

Chanatt L.

Chanattagarn Inchom
Section Head
โทรศัพท์ 204-0-0008

Approved by

Kankorn Anek

Kankorn Anek
Senior Manager
โทรศัพท์ 204-0-0004

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Analysis / Test Report



TESTING

No.0009

Lot ID: 2459569

Date Received : Jun 03, 2024

Date Reported : Jun 11, 2024

Report Number : 3003568-2

Client : WHA Utilities and Power Public Company Limited
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150P/O :
Project Name :
Project Location : WHA EIE

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.

Sample Number 23140118-1
Sampled Date Jan 19, 2024 2:30 PM
Sample Description Effluent
Location WHA EIE : WWTP
Date Analysis Commenced Jan 19, 2024
Condition of Sample Contained in one amber glass bottle, two glass vials and ten 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	2.3	≤16	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	32	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Cyanide as CN	mg/L	0.001	0.005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, F)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 8th ed., 2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management

N. Banchohgit

Narumon Banchohgit
Supervisor
โทรศัพท์ 204-0-9945

Approved by

Dej Changchong

Dej Changchong
Senior Manager
โทรศัพท์ 204-0-9942

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Analysis / Test Report

Lot ID: 2459569

Date Received : Jun 03, 2024

Date Reported : Jun 11, 2024

Report Number : 3003568-3

Client : WHA Utilities and Power Public Company Limited
18, Pakomsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150P/O :
Project Name :
Project Location : WHA EIE

Sample Number 2459569-1
Sampled Date Jun 03, 2024 10:05 AM
Sample Description Influent
Location WHA EIE : Pumping Station
Date Analysis Commenced Jun 04, 2024
Condition of Sample Contained in one amber glass bottle and four 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
Pesticides - Organochlorine Group							
alpha-Chlordane	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
gamma-Chlordane	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Hexachlorobenzene	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Mirex	ug/L	0.01	0.02	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Guideline : Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Sansoen Khuyoksu วิเศษสุข, Thanassorn Namakunna นามะคุนนา

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

Technical Management

Siriuk P.

Siriuk Bunak
Section Head

Approved by

Siriuk P.

Siriuk Bunak
Section Head

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Analysis / Test Report



TESTING

Lot ID: 23140118
Date Received : Jan 19, 2024
Date Reported : Jan 25, 2024
Report Number : 2860365-1

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

Page 2 of 2

Sample Number	23140118-1						
Sampled Date	Jan 19, 2024 2:30 PM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Jan 19, 2024						
Condition of Sample	Contained in one amber glass bottle, two glass vials and ten 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							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-52 (C, F)	Rayong
Temperature *	Degree C	-	-	35.3	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2010	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.3	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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).
Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Paramet Sattayakun รหัสประจำตัว >323-94976, Panupong Manit รหัสประจำตัว >204-8600

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

N. Banongnit

Approved by

D. Chanchon

Nanumon Banchongnit
Supervisor
รหัสประจำตัว >323-9445

Dej Chanchon
Senior Manager
รหัสประจำตัว >323-9442

Result apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
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Analysis / Test Report



TESTING

Lot ID: 23140118
Date Received : Jan 19, 2024
Date Reported : Jan 26, 2024
Report Number : 2860365-2

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

Page 2 of 2

Page 2 of 2

Sample Number	23140118-1						
Sampled Date	Jan 19, 2024 2:30 PM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Jan 20, 2024						
Condition of Sample	Contained in one amber glass bottle, two glass vials and ten 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							
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	0.0006	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.16	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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).
Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Paramet Sattayakun รหัสประจำตัว >323-94976, Panupong Manit รหัสประจำตัว >204-8600

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

Chanatt L.

Approved by

Chanatt L.

Chanattagorn Inthom
Section Head
รหัสประจำตัว >204-4710

Kanokorn Anek
Senior Manager
รหัสประจำตัว >204-6111

Result apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
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3 (Version), AL GL-01 (1.4.948)



Analysis / Test Report



TESTING

Lot ID: 23140118
Date Received : Jan 19, 2024
Date Reported : Jan 26, 2024
Report Number : 2860365-2

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

Page 1 of 2

Page 1 of 2

Sample Number	23140118-1						
Sampled Date	Jan 19, 2024 2:30 PM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Jan 20, 2024						
Condition of Sample	Contained in one amber glass bottle, two glass vials and ten 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	0.004	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.12	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.002	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.31	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Chanatt L.

Approved by

Chanatt L.

Chanattagorn Inthom
Section Head
รหัสประจำตัว >204-4710

Kanokorn Anek
Senior Manager
รหัสประจำตัว >204-6111

Result apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
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3 (Version), AL GL-01 (1.4.948)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0009
Lot ID: 23140118
Date Received : Jan 19, 2024
Date Reported : Jan 26, 2024
Report Number : 2860365-3

Page 2 of 2

The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0042
Lot ID: 2411087
Date Received : Feb 01, 2024
Date Reported : Feb 08, 2024
Report Number : 2897142-1

Page 1 of 2

Sample Number : 2411087-1
Sampled Date : Feb 01, 2024 10:04 AM
Sample Description : Effluent
Location : WHA EIE : WWTP
Date Analysis Commenced : Feb 01, 2024
Condition of Sample : Contained in two glass vials, one amber glass bottle and nine 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	≤16	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 5220 D	Rayong
Cyanide as CN	mg/L	0.001	0.005	0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - CH (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤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, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C		-	-	8.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	0.2	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - Cl (F)	Rayong

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Chanattam Imchom
Section Head

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5127-1312 EMAIL: S.Watchara@AL.GL (P. 1099H)

Technical Management

N. Banthongkhit
Nanumon Banthongkhit
Supervisor
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

Approved by

D. Changchom
Deg Changchom
Senior Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0042
Lot ID: 2411087
Date Received : Feb 01, 2024
Date Reported : Feb 08, 2024
Report Number : 2897142-1

Page 2 of 2

Sample Number : 2411087-1
Sampled Date : Feb 01, 2024 10:04 AM
Sample Description : Effluent
Location : WHA EIE : WWTP
Date Analysis Commenced : Feb 01, 2024
Condition of Sample : Contained in two glass vials, one amber glass bottle and nine 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							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	34.6	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1912	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.9	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part N10 (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, 23rd ed., 2017, 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).

Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563
Sampling By : Chaisorn Lertnanthakunchai โทรศัพท์ ๐-๓๒๓-๙๔๔๕, Kambudint Kitsapavarn โทรศัพท์ ๐-๓๒๓-๙๔๔๕

Remarks :
LOD : Limit of Detection
" < " : Lower than LOQ (Limit of Quantification) / 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

N. Banthongkhit

Nanumon Banthongkhit
Supervisor
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

Approved by

D. Changchom

Deg Changchom
Senior Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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5127-1312 EMAIL: S.Watchara@AL.GL (P. 1099H)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0009
Lot ID: 2411087
Date Received : Feb 01, 2024
Date Reported : Feb 08, 2024
Report Number : 2897142-2

Page 1 of 3

Sample Number : 2411087-1
Sampled Date : Feb 01, 2024 10:04 AM
Sample Description : Effluent
Location : WHA EIE : WWTP
Date Analysis Commenced : Feb 02, 2024
Condition of Sample : Contained in two glass vials, one amber glass bottle and nine 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.06	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	<0.0005	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	0.007	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.003	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Savitree N.

Savitree Nongsingam
Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

Approved by

Kanokkorn Anek

Kanokkorn Anek
Senior Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

ADDRESS 104 Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3197
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5127-1312 EMAIL: S.Watchara@AL.GL (P. 1099H)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

Sample Number	2411087-1						
Sampled Date	Feb 01, 2024 10:04 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Feb 02, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine 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							
Manganese	mg/L	0.0003	0.0005	0.33	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	0.0008	≤0.02	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.17	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, 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).
Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563
Sampling By : Chainorn Lerbanthakunchai, Kirdbundit Kitsupavanit

Remark :
LOD : Limit of Detection

Technical Management

Savitree N.

Savitree Nonsangiam
Manager
โทรศัพท์ ๖-204-๖-4709

Approved by

Kanokkom Anek

Kanokkom Anek
Senior Manager
โทรศัพท์ ๖-204-๖-6111

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

Sample Number	2411087-1						
Sampled Date	Feb 01, 2024 10:04 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Feb 01, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine 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							
Iron	mg/L	0.003	0.005	0.36	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.12	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH2 (D)	Rayong
Conductivity at 25 Degree C *	microhm/cm	-	0.5	2824	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Nitrate as N *	mg/L	0.015	0.05	7.96	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO2 (E)	Rayong
Silica as SiO2 *	mg/L	0.2	0.5	6.3	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SiO2 (C)	Rayong
Total Phosphorus as P *	mg/L	0.2	0.5	1.5	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 365.4	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).
Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563
Sampling By : Chainorn Lerbanthakunchai, Kirdbundit Kitsupavanit

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

Approved by

Savitree N.

Savitree Nonsangiam
Manager

Result apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

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Life Sciences www.alsglobal.com
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5137-1312 EMAIL 5 (Weiss) AL GL (pt) (7.50PH)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

"LC" : 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.	Page 2 of 3
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Technical Management

Savitree N.

Savitree Nonsangiam
Manager
โทรศัพท์ ๖-204-๖-4709

Approved by

Kanokkom Anek

Kanokkom Anek
Senior Manager
โทรศัพท์ ๖-204-๖-6111

Result apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

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Life Sciences www.alsglobal.com
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5137-1312 EMAIL 5 (Weiss) AL GL (pt) (7.50PH)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.	Page 2 of 2
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Analysis / Test Report



TESTING
No.0042

Lot ID: 2420377

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2916726-1

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkhraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2420377-1
Sampled Date Mar 01, 2024 12:12 PM
Sample Description Effluent
Location WHA EIE : WWTP
Date Analysis Commenced Mar 01, 2024
Condition of Sample Contained in one amber glass bottle, two glass vials and nine 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	2.2	≤16	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	40	≤120	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Cyanide as CN	mg/L	0.001	0.005	<0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, D)	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤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, 23rd ed., 2017, part 520 B	Rayong
pH at 25 degree C	-	-	-	8.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5330 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management

Photchanas S.

Photchanas Seeda
Scientist (4)

โทรศัพท์ ๖-323-๙-9446

Approved by

D. Changchon

Deg Changchon
Senior Manager

โทรศัพท์ ๖-323-๙-9442

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.

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Analysis / Test Report



TESTING
No.0042

Lot ID: 2420377

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2916726-1

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkhraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2420377-1
Sampled Date Mar 01, 2024 12:12 PM
Sample Description Effluent
Location WHA EIE : WWTP
Date Analysis Commenced Mar 01, 2024
Condition of Sample Contained in one amber glass bottle, two glass vials and nine 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							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	36.0	≤40	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1960	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.5	≤100	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NHI3 (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, 23rd ed., 2017, 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).

Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Suravit Narapong โทรศัพท์ ๖-323-๙-0011, Thanassun Namakunna โทรศัพท์ ๖-204-๙-0101

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

Photchanas S.

Photchanas Seeda
Scientist (4)

โทรศัพท์ ๖-323-๙-9446

Approved by

D. Changchon

Deg Changchon
Senior Manager

โทรศัพท์ ๖-323-๙-9442

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.

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Analysis / Test Report



TESTING
No.0009

Lot ID: 2420377

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2916726-2

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkhraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2420377-1
Sampled Date Mar 01, 2024 12:12 PM
Sample Description Effluent
Location WHA EIE : WWTP
Date Analysis Commenced Mar 04, 2024
Condition of Sample Contained in one amber glass bottle, two glass vials and nine 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.09	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	0.003	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.002	≤2.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Savitree N.

Savitree Naisangam
Manager

โทรศัพท์ ๖-204-๙-0007

Approved by

Kanokorn Anek

Kanokorn Anek
Senior Manager

โทรศัพท์ ๖-204-๙-0004

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.

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Analysis / Test Report



TESTING
No.0009

Lot ID: 2420377

Date Received : Mar 01, 2024

Date Reported : Mar 08, 2024

Report Number : 2916726-2

Client : WHA Utilities and Power Public Company Limited

18, Pakomsongkhraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number 2420377-1
Sampled Date Mar 01, 2024 12:12 PM
Sample Description Effluent
Location WHA EIE : WWTP
Date Analysis Commenced Mar 04, 2024
Condition of Sample Contained in one amber glass bottle, two glass vials and nine 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							
Manganese	mg/L	0.0003	0.0005	0.45	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	<0.0005	≤0.02	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.20	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, 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).

Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Suravit Narapong โทรศัพท์ ๖-323-๙-0011, Thanassun Namakunna โทรศัพท์ ๖-204-๙-0101

Remark :

LOD : Limit of Detection

Technical Management

Savitree N.

Savitree Naisangam
Manager

โทรศัพท์ ๖-204-๙-0007

Approved by

Kanokorn Anek

Kanokorn Anek
Senior Manager

โทรศัพท์ ๖-204-๙-0004

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING
No.0009

Lot ID: 2420377
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2916726-2

Page 3 of 3

- "<" : Lower than LOQ (Limit of Quantitation) / LOD (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.



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING
No.0009

Lot ID: 2420377
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2916726-3

Page 1 of 2

Sample Number	2420377-1						
Sampled Date	Mar 01, 2024 12:12 PM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Mar 01, 2024						
Condition of Sample	Contained in one amber glass bottle, two glass vials and nine 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							
Iron	mg/L	0.003	0.005	0.21	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.16	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (F)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	3066	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Nitrate as N *	mg/L	0.015	0.05	1.87	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Silica as SiO2 *	mg/L	0.2	0.5	8.6	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SiO2 (C)	Rayong
Total Phosphorus as P *	mg/L	0.2	0.5	1.0	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 365.1	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).

Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Suravit Narapong , Thanassou Namakunna

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

Technical Management

Savitree N.

Savitree Noisangiam
Manager
โทรสาร ๖๖-๖๖๖๖-๖๖๖๖

Approved by

Kanokkom Anek

Kanokkom Anek
Senior Manager
โทรสาร ๖๖-๖๖๖๖-๖๖๖๖

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5 (Vapores), AL GL (opt) (7.30PH)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING
No.0009

Lot ID: 2420377
Date Received : Mar 01, 2024
Date Reported : Mar 08, 2024
Report Number : 2916726-3

Page 2 of 2

- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING
No.0042

Lot ID: 2433962
Date Received : Apr 08, 2024
Date Reported : Apr 18, 2024
Report Number : 2946377-1

Page 1 of 2

Page 1 of 2

Sample Number	2433962-1						
Sampled Date	Apr 08, 2024 10:20 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Apr 08, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine 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	<2.0	≤16	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	50	≤120	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Cyanide as CN	mg/L	0.001	0.005	0.008	≤0.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	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, 23rd ed., 2017, part 5320 B	Rayong
pH at 25 degree C	-	-	-	8.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5330 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management
N. Banphit
Narumon Banphongkit
Supervisor
โทรสาร ๖๖-๖๖๖๖-๖๖๖๖

Approved by
D. Chanchon
Dej Chanchon
Senior Manager
โทรสาร ๖๖-๖๖๖๖-๖๖๖๖

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5 (Vapores), AL GL (opt) (7.30PH)



Analysis / Test Report



TESTING

No.0042

Lot ID: 2433962

Date Received : Apr 08, 2024

Date Reported : Apr 18, 2024

Report Number : 2946377-1

Client : WHA Utilities and Power Public Company Limited
18, Pakomsongkrohng Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number	2433962-1						
Sampled Date	Apr 08, 2024 10:20 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Apr 08, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine 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							
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	36.4	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1320	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part 1943 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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).

Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Sansoen Khuyokul วิเศษกุล >323-a-0005, Thanasoun Namakunha วิเศษกุล >204-a-0101

Remark :
- LOD : Limit of Detection
- <L : Lower than LOQ (Limit of Quantification) / 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

N. Banthongkit

Narumon Banthongkit
Supervisor
วิเศษกุล >323-a-9445

Approved by

D. Chanchong

Det Chanchong
Senior Manager
วิเศษกุล >323-a-9442

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S (Pavon), AL (L), PL (11.144P)



Analysis / Test Report



TESTING

No.0009

Lot ID: 2433962

Date Received : Apr 08, 2024

Date Reported : Apr 18, 2024

Report Number : 2946377-2

Client : WHA Utilities and Power Public Company Limited
18, Pakomsongkrohng Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : WHA EIE

Sample Number	2433962-1						
Sampled Date	Apr 08, 2024 10:20 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Apr 09, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine 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							
Manganese	mg/L	0.0003	0.0005	0.39	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	0.001	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.54	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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 : Sansoen Khuyokul วิเศษกุล >323-a-0005, Thanasoun Namakunha วิเศษกุล >204-a-0101

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

Technical Management

Chanatt L.

Chanattagorn Inmohom
Section Head
วิเศษกุล >204-a-0008

Approved by

K. Anek

Kanokkom Anek
Senior Manager
วิเศษกุล >204-a-0004

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S (Pavon), AL (L), PL (11.144P)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No. 0009
Lot ID: 2433962
Date Received : Apr 08, 2024
Date Reported : Apr 18, 2024
Report Number : 2946377-3

Page 1 of 2

Sample Number	2433962-1						
Sampled Date	Apr 08, 2024 10:20 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Apr 08, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine 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							
Iron	mg/L	0.003	0.005	0.62	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	1.04	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (F)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	3744	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Nitrate as N *	mg/L	0.015	0.05	7.15	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Silica as SiO2 *	mg/L	0.2	0.5	12.4	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SiO2 (C)	Rayong
Total Phosphorus as P *	mg/L	0.2	0.5	1.3	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 365.4	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).
Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Pua), 4th edition 2020, B.E. 2563
Sampling By : Sansen Khuyoksu , Thanasoun Namakunna

Remark :
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Approved by

Channattam Jinchom
Section Head

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No. 0009
Lot ID: 2433962
Date Received : Apr 08, 2024
Date Reported : Apr 18, 2024
Report Number : 2946377-3

Page 2 of 2

The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Section Head

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE

TESTING
No. 0042
Lot ID: 2445991
Date Received : May 06, 2024
Date Reported : May 13, 2024
Report Number : 2973783-1

Page 1 of 2

Sample Number	2445991-1						
Sampled Date	May 06, 2024 10:40 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	May 06, 2024						
Condition of Sample	Contained in one amber glass bottle, two glass vials and ten 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	5.4	≤16	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	51	≤120	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	31	≤300	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	28	≤300	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN	mg/L	0.001	0.005	<0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, D)	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤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, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong

Technical Management

N. Banjongkitt
Narumon Banjongkitt
Supervisor
โทรศัพท์ +66-323-9445

Approved by

Dej Changchon
Dej Changchon
Senior Manager
โทรศัพท์ +66-323-9442

ADDRESS 616/10 Moo 5 T. Maerim Khu A, Thukidang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
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P/O :
Project Name :
Project Location : WHA EIE

TESTING
No. 0042
Lot ID: 2445991
Date Received : May 06, 2024
Date Reported : May 13, 2024
Report Number : 2973783-1

Page 2 of 2

Page 2 of 3

Sample Number	2445991-1						
Sampled Date	May 06, 2024 10:40 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	May 06, 2024						
Condition of Sample	Contained in one amber glass bottle, two glass vials and ten 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							
Phenol	mg/L	0.005	0.01	<0.010	≤1.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	37.0	≤40	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2530 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2060	≤3000	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 4500-Nitrog (C), part 4500-N (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤50	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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).
Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Pua), 4th edition 2020, B.E. 2563
Sampling By : Sansen Khuyoksu โทรศัพท์ +66-323-94005, Thanasoun Namakunna โทรศัพท์ +66-323-94010

Technical Management

N. Banjongkitt
Narumon Banjongkitt
Supervisor
โทรศัพท์ +66-323-9445

Approved by

Dej Changchon
Dej Changchon
Senior Manager
โทรศัพท์ +66-323-9442

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Analysis / Test Report

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P/O :
Project Name :
Project Location : WHA EIE



TESTING
No.0042

Lot ID: 2445991
Date Received : May 06, 2024
Date Reported : May 13, 2024
Report Number : 2973783-1

Page 3 of 3

Remark :
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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING
No.0009

Lot ID: 2445991
Date Received : May 06, 2024
Date Reported : May 13, 2024
Report Number : 2973783-2

Page 1 of 3

Sample Number : 2445991-1
Sample Date : May 06, 2024 10:40 AM
Sample Description : Effluent
Location : WHA EIE : WWTP
Date Analysis Commenced : May 07, 2024
Condition of Sample : Contained in one amber glass bottle, two glass vials and ten 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	0.004	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.10	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	0.0006	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	0.008	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.006	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	0.0006	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

N. Banthit
Narumon Banthongkiet
Supervisor
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

Approved by

D. Chanchon
Dei Chanchon
Senior Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

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5317-132 (ENGL)

3 (Reports), AL, GL, RL (1 & 0.00%)

Technical Management

Savitree N.
Savitree Nongsangiam
Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

Approved by

Kanokkorn Anek
Kanokkorn Anek
Senior Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

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5317-132 (ENGL)

3 (Reports), AL, GL, RL (1 & 0.00%)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING
No.0009

Lot ID: 2445991
Date Received : May 06, 2024
Date Reported : May 13, 2024
Report Number : 2973783-2

Page 2 of 3

Sample Number	2445991-1						
Sampled Date	May 06, 2024 10:40 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	May 07, 2024						
Condition of Sample	Contained in one amber glass bottle, two glass vials and ten 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							
Manganese	mg/L	0.0003	0.0005	0.32	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	0.0007	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	0.01	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.38	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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).
Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Pu), 4th edition 2020, B.E. 2563

Sampling By : Sansoen Khuyoksuai โทรศัพท์ ๐-๓๒๓-๙๔๔๕, Thanasoun Namakunna โทรศัพท์ ๐-๓๒๓-๙๔๔๕

Remark :
- LOD : Limit of Detection

Technical Management

Savitree N.
Savitree Nongsangiam
Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

Approved by

Kanokkorn Anek
Kanokkorn Anek
Senior Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

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3 (Reports), AL, GL, RL (1 & 0.00%)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING
No.0009

Lot ID: 2445991
Date Received : May 06, 2024
Date Reported : May 13, 2024
Report Number : 2973783-2

Page 3 of 3

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Technical Management

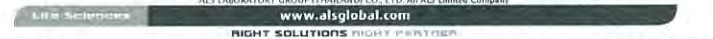
Savitree N.
Savitree Nongsangiam
Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

Approved by

Kanokkorn Anek
Kanokkorn Anek
Senior Manager
โทรศัพท์ ๐-๓๒๓-๙๔๔๕

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5317-132 (ENGL)

3 (Reports), AL, GL, RL (1 & 0.00%)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0009
Lot ID: 2445991
Date Received : May 06, 2024
Date Reported : May 13, 2024
Report Number : 2973783-3

Page 1 of 2

Sample Number	2445991-1						
Sampled Date	May 06, 2024 10:40 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	May 06, 2024						
Condition of Sample	Contained in one amber glass bottle, two glass vials and ten 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							
Iron	mg/L	0.003	0.005	1.01	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	5.19	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (F)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	3163	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Nitrate as N *	mg/L	0.015	0.05	7.34	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
Silica as SiO2 *	mg/L	0.2	0.5	12.8	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SiO2 (C)	Rayong
Total Phosphorus as P *	mg/L	0.2	0.5	1.3	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 365.4	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).
Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Pui), 4th edition 2020, B.E. 2563

Sampling By : Samson Khuyokul , Thanasoon 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.

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Approved by

Sawitree N.
Sawitree Nolsangiam
Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3197
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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0009
Lot ID: 2445991
Date Received : May 06, 2024
Date Reported : May 13, 2024
Report Number : 2973783-3

Page 2 of 2

The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.							
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Sawitree N.
Sawitree Nolsangiam
Manager

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0042
Lot ID: 2459469
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3003339-1

Page 1 of 2

Sample Number	2459469-1						
Sampled Date	Jun 03, 2024 10:35 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, a lot of 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	3.8	≤16	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	55	≤120	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Cyanide as CN	mg/L	0.001	0.005	0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	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, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong

Technical Management

Photchana S.
Photchana Seeda
Scientist (4)
โทรศัพท์ +66-323-9-9446

Approved by

Dj Changchon
Senior Manager
โทรศัพท์ +66-323-9-9442

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0042
Lot ID: 2459469
Date Received : Jun 03, 2024
Date Reported : Jun 10, 2024
Report Number : 3003339-1

Page 2 of 2

Page 2 of 2

Sample Number	2459469-1						
Sampled Date	Jun 03, 2024 10:35 AM						
Sample Description	Effluent						
Location	WHA EIE : WWTP						
Date Analysis Commenced	Jun 03, 2024						
Condition of Sample	Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, a lot of solid and turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Silica as SiO ₂ *	mg/L	0.2	0.5	11.0	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SiO ₂ (C)	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	36.7	≤40	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1630	≤3000	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 4500-Norg (C), part Nrel (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).
Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Pui), 4th edition 2020, B.E. 2563

Sampling By : Samson Khuyokul โทรศัพท์ +66-323-9-0005, Thanasoon Namakunna โทรศัพท์ +66-323-9-0101

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

Photchana S.
Photchana Seeda
Scientist (4)
โทรศัพท์ +66-323-9-9446

Approved by

Dj Changchon
Senior Manager
โทรศัพท์ +66-323-9-9442

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2459469

Date Received : Jun 03, 2024

Date Reported : Jun 11, 2024

Report Number : 3003339-2

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150P/O :
Project Name :
Project Location : WHA EIE

Sample Number 2459469-1
Sampled Date Jun 03, 2024 10:35 AM
Sample Description Effluent
Location WHA EIE : WWTP
Date Analysis Commenced Jun 04, 2024
Condition of Sample Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, a lot of solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.009	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.12	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	0.0007	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	0.02	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.02	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-C-8	Bangkok
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Siriluk P.

Siriluk Bunmak
Section Head
โทรศัพท์ ๖-204-๐-0013

Approved by

Kankorn Anek

Kankorn Anek
Senior Manager
โทรศัพท์ ๖-204-๐-0004

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2459469

Date Received : Jun 03, 2024

Date Reported : Jun 11, 2024

Report Number : 3003339-2

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150P/O :
Project Name :
Project Location : WHA EIE

Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563
Sampling By : Sansoen Khuyoksu โทรศัพท์ ๖-323-๐-0005 , Thanasoun Namakunna โทรศัพท์ ๖-204-๐-0101

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

Siriluk P.

Siriluk Bunmak
Section Head
โทรศัพท์ ๖-204-๐-0013

Approved by

Kankorn Anek

Kankorn Anek
Senior Manager
โทรศัพท์ ๖-204-๐-0004

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2459469

Date Received : Jun 03, 2024

Date Reported : Jun 11, 2024

Report Number : 3003339-2

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150P/O :
Project Name :
Project Location : WHA EIE

Sample Number 2459469-1
Sampled Date Jun 03, 2024 10:35 AM
Sample Description Effluent
Location WHA EIE : WWTP
Date Analysis Commenced Jun 04, 2024
Condition of Sample Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, a lot of solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Manganese	mg/L	0.0003	0.0005	0.27	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	0.001	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	0.02	≤0.75	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.50	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	2.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, 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).

Technical Management

Siriluk P.

Siriluk Bunmak
Section Head
โทรศัพท์ ๖-204-๐-0013

Approved by

Kankorn Anek

Kankorn Anek
Senior Manager
โทรศัพท์ ๖-204-๐-0004

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2459469

Date Received : Jun 03, 2024

Date Reported : Jun 11, 2024

Report Number : 3003339-3

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150P/O :
Project Name :
Project Location : WHA EIE

Sample Number 2459469-1
Sampled Date Jun 03, 2024 10:35 AM
Sample Description Effluent
Location WHA EIE : WWTP
Date Analysis Commenced Jun 03, 2024
Condition of Sample Contained in two glass vials, one amber glass bottle and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, a lot of solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	3.76	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	4.65	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (F)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	2941	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Nitrate as N *	mg/L	0.015	0.05	1.84	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	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).

Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563
Sampling By : Sansoen Khuyoksu , 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.
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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0042
Lot ID: 2459562
Date Received : Jun 17, 2024
Date Reported : Jun 19, 2024
Report Number : 3003548-4

Page 1 of 1

Sample Number 2459562-1
Sampled Date Jun 17, 2024 11:00 AM
Sample Description Effluent
Location WHA EIE : WWTP
Date Analysis Commenced Jun 18, 2024
Condition of Sample Contained in two glass vials, one amber glass bottle and ten 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	38	≤50	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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 : Wariop Hunchaiwong รหัสประจำตัว >323-๙957, Pattarapol Sawangtattam รหัสประจำตัว >204-๙002

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

Photchana S.

Photchana Seeds
Scientist (4)
รหัสประจำตัว >323-๙946

Approved by

D. Chongchon

Dej Chongchon
Senior Manager
รหัสประจำตัว >323-๙942

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5137-1312 (ENGL)

5 (Version), AL (L) (pt 1) (4/09)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0042
Lot ID: 23140119
Date Received : Jan 19, 2024
Date Reported : Jan 26, 2024
Report Number : 2860361-1

Page 2 of 2

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

N. Banongkit

Nanum Banchongkit
Supervisor
รหัสประจำตัว >323-๙945

Approved by

D. Chongchon

Dej Chongchon
Senior Manager
รหัสประจำตัว >323-๙942

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of the report may be reproduced in any form without written consent from the laboratory.
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5137-1312 (ENGL)

5 (Version), AL (L) (pt 1) (4/09)



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0042
Lot ID: 23140119
Date Received : Jan 19, 2024
Date Reported : Jan 26, 2024
Report Number : 2860361-1

Page 1 of 2

Sample Number 23140119-1
Sampled Date Jan 19, 2024 3:02 PM
Sample Description Wastewater
Location WHA EIE : Effluent_High TDS
Date Analysis Commenced Jan 19, 2024
Condition of Sample Contained in one amber glass bottle and three 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	6.1	≤16	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	36.7	≤40	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	12700	(1)	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Sampling By : Paramet Sattayakul รหัสประจำตัว >323-๙9476

Remark :
LOD : Limit of Detection
"≤" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

N. Banongkit

Nanum Banchongkit
Supervisor
รหัสประจำตัว >323-๙945

Approved by

D. Chongchon

Dej Chongchon
Senior Manager
รหัสประจำตัว >323-๙942

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Analysis / Test Report

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18, Pakornsongkrohraj Road, Tambol Huaypong, Amphur Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : WHA EIE



TESTING

No.0042
Lot ID: 2411116
Date Received : Feb 01, 2024
Date Reported : Feb 07, 2024
Report Number : 2897171-1

Page 1 of 2

Sample Number 2411116-1
Sampled Date Feb 01, 2024 11:14 AM
Sample Description Wastewater
Location WHA EIE : Effluent_High TDS
Date Analysis Commenced Feb 01, 2024
Condition of Sample Contained in one amber glass bottle and three 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	<2.0	≤16	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	48	≤120	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	36.1	≤40	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	11500	(1)	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	30	≤50	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : BOD Guideline set by Amendment details report of Environmental Health Impact Assessment Report of WHA Eastern Industrial Estate (Map Ta Put), 4th edition 2020, B.E. 2563

Technical Management

N. Banongkit

Nanum Banchongkit
Supervisor
รหัสประจำตัว >323-๙945

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