

ภาคผนวก ค

ใบรับรองผลการตรวจวัดคุณภาพสิ่งแวดล้อม

ภาคผนวก ค-1

ผลการตรวจวัดคุณภาพอากาศในบรรยากาศ



Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai,
Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118717

Date Received : Oct 29, 2024

Date Reported : Nov 04, 2024

Report Number: 3139544-1

Page 1 of 1

Sample Description	Air Quality				
Location	บริเวณสำนักงานเขตประกอบการฯ (GPS 47P 0742968, 1419447)				
Date Analysis Commenced	Oct 31, 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)
24118717-1	Oct 21 - Oct 22, 2024	0.034	0.020	758	32
24118717-2	Oct 22 - Oct 23, 2024	0.042	0.020	758	30
24118717-3	Oct 23 - Oct 24, 2024	0.047	0.026	758	32
24118717-4	Oct 24 - Oct 25, 2024	0.063	0.039	758	32
24118717-5	Oct 25 - Oct 26, 2024	0.072	0.041	758	32
24118717-6	Oct 26 - Oct 27, 2024	0.046	0.023	758	32
24118717-7	Oct 27 - Oct 28, 2024	0.036	0.020	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 : Chatchai Sukpia

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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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai,
Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118717

Date Received : Oct 29, 2024

Date Reported : Nov 04, 2024

Report Number: 3139544-2

Page 1 of 1

Sample Description	Air Quality				
Location	ชุมชนบ้านสามแยก (GPS 47P 0742172, 1417901)				
Date Analysis Commenced	Oct 31, 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)
24118717-8	Oct 21 - Oct 22, 2024	0.053	0.025	758	32
24118717-9	Oct 22 - Oct 23, 2024	0.049	0.022	758	30
24118717-10	Oct 23 - Oct 24, 2024	0.058	0.028	758	32
24118717-11	Oct 24 - Oct 25, 2024	0.081	0.040	758	32
24118717-12	Oct 25 - Oct 26, 2024	0.098	0.040	758	32
24118717-13	Oct 26 - Oct 27, 2024	0.069	0.029	758	32
24118717-14	Oct 27 - Oct 28, 2024	0.051	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 : Chatchai Sukpia

Remark :

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai,
Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118717

Date Received : Oct 29, 2024

Date Reported : Nov 04, 2024

Report Number: 3139544-3

Page 1 of 1

Sample Description	Air Quality
Location	ชุมชนนิคมสร้างตนเอง (GPS 47P 0743003, 1422591)
Date Analysis Commenced	Oct 31, 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)
24118717-15	Oct 21 - Oct 22, 2024	0.022	0.017	758	32
24118717-16	Oct 22 - Oct 23, 2024	0.032	0.020	758	30
24118717-17	Oct 23 - Oct 24, 2024	0.037	0.030	758	32
24118717-18	Oct 24 - Oct 25, 2024	0.047	0.034	758	32
24118717-19	Oct 25 - Oct 26, 2024	0.061	0.032	758	32
24118717-20	Oct 26 - Oct 27, 2024	0.042	0.021	758	32
24118717-21	Oct 27 - Oct 28, 2024	0.031	0.021	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 : Chatchai Sukpia

Remark :

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

Approved by

Thanita K.

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Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai,
Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118717

Date Received : Oct 29, 2024

Date Reported : Nov 04, 2024

Report Number: 3139544-4

Page 1 of 1

Sample Description	Air Quality				
Location	สถานีอนามัยบ้านละหารไร่ (GPS 47P 0749504, 1421964)				
Date Analysis Commenced	Oct 31, 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)
24118717-22	Oct 21 - Oct 22, 2024	0.060	0.029	758	32
24118717-23	Oct 22 - Oct 23, 2024	0.060	0.027	758	30
24118717-24	Oct 23 - Oct 24, 2024	0.054	0.028	758	32
24118717-25	Oct 24 - Oct 25, 2024	0.062	0.035	758	32
24118717-26	Oct 25 - Oct 26, 2024	0.099	0.048	758	32
24118717-27	Oct 26 - Oct 27, 2024	0.081	0.033	758	32
24118717-28	Oct 27 - Oct 28, 2024	0.054	0.023	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 : Chatchai Sukpia

Remark :

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

Approved by

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118710

Date Received : Nov 01, 2024

Date Reported : Nov 07, 2024

Report Number: 3139533-1

Page 1 of 1

Sample Description	Air Quality						
Location	บริเวณสำนักงานเขตประกอบการฯ						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Oct 21, 2024 - Oct 28, 2024						
Measurement by	Chatchai Sukpia						
	24118710-1 Oct 21, 2024	24118710-2 Oct 22, 2024	24118710-3 Oct 23, 2024	24118710-4 Oct 24, 2024	24118710-5 Oct 25, 2024	24118710-6 Oct 26, 2024	24118710-7 Oct 27, 2024
Time							
02:00 PM - 03:00 PM	0.0079	0.0079	0.0086	0.0079	0.0077	0.0048	0.0087
03:00 PM - 04:00 PM	0.0071	0.0091	0.0081	0.0066	0.0073	0.0086	0.0090
04:00 PM - 05:00 PM	0.0064	0.0099	0.0071	0.0058	0.0095	0.0094	0.0089
05:00 PM - 06:00 PM	0.0062	0.0075	0.0072	0.0080	0.0093	0.0072	0.0096
06:00 PM - 07:00 PM	0.0057	0.0069	0.0070	0.0077	0.0076	0.0061	0.0097
07:00 PM - 08:00 PM	0.0073	0.0066	0.0065	0.0094	0.0068	0.0061	0.0097
08:00 PM - 09:00 PM	0.0088	0.0063	0.0066	0.0088	0.0058	0.0063	0.0087
09:00 PM - 10:00 PM	0.0065	0.0085	0.0075	0.0052	0.0079	0.0070	0.0061
10:00 PM - 11:00 PM	0.0093	0.0091	0.0073	0.0072	0.0091	0.0093	0.0065
11:00 PM - 12:00 AM	0.0097	0.0094	0.0084	0.0048	0.0063	0.0073	0.0065
12:00 AM - 01:00 AM	0.0099	0.0097	0.0093	0.0087	0.0098	0.0088	0.0057
01:00 AM - 02:00 AM	0.0098	0.0086	0.0096	0.0070	0.0094	0.0098	0.0055
02:00 AM - 03:00 AM	0.0091	0.0094	0.0093	0.0055	0.0093	0.0093	0.0062
03:00 AM - 04:00 AM	0.0080	0.0088	0.0096	0.0077	0.0051	0.0069	0.0036
04:00 AM - 05:00 AM	0.0049	0.0067	0.0084	0.0042	0.0037	0.0042	0.0035
05:00 AM - 06:00 AM	0.0038	0.0052	0.0055	0.0066	0.0042	0.0049	0.0033
06:00 AM - 07:00 AM	0.0033	0.0050	0.0055	0.0073	0.0050	0.0068	0.0050
07:00 AM - 08:00 AM	0.0040	0.0043	0.0060	0.0080	0.0059	0.0060	0.0063
08:00 AM - 09:00 AM	0.0044	0.0048	0.0052	0.0052	0.0051	0.0058	0.0059
09:00 AM - 10:00 AM	0.0048	0.0060	0.0050	0.0045	0.0068	0.0059	0.0039
10:00 AM - 11:00 AM	0.0039	0.0070	0.0054	0.0042	0.0074	0.0052	0.0040
11:00 AM - 12:00 PM	0.0042	0.0085	0.0050	0.0055	0.0088	0.0060	0.0045
12:00 PM - 01:00 PM	0.0051	0.0096	0.0063	0.0081	0.0064	0.0042	0.0067
01:00 PM - 02:00 PM	0.0042	0.0087	0.0074	0.0096	0.0050	0.0039	0.0093
Average	0.0064	0.0076	0.0072	0.0068	0.0070	0.0067	0.0065
1hr - Maximum	0.0099	0.0099	0.0096	0.0096	0.0098	0.0098	0.0097
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)

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Approved by

Orawan R.

Orawan Rakyong

Scientist (3)

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118710

Date Received : Nov 01, 2024

Date Reported : Nov 07, 2024

Report Number: 3158200-1

Page 1 of 1

Sample Description	Air Quality						
Location	ชุมชนบ้านสามแยก						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Oct 21, 2024 - Oct 28, 2024						
Measurement by	Chatchai Sukpia						
	24118710-8	24118710-9	24118710-10	24118710-11	24118710-12	24118710-13	24118710-14
Time	Oct 21, 2024	Oct 22, 2024	Oct 23, 2024	Oct 24, 2024	Oct 25, 2024	Oct 26, 2024	Oct 27, 2024
03:00 PM - 04:00 PM	0.0086	0.0097	0.0054	0.0081	0.0084	0.0092	0.0067
04:00 PM - 05:00 PM	0.0095	0.0098	0.0075	0.0078	0.0087	0.0093	0.0095
05:00 PM - 06:00 PM	0.0075	0.0099	0.0068	0.0068	0.0073	0.0081	0.0099
06:00 PM - 07:00 PM	0.0094	0.0074	0.0095	0.0089	0.0088	0.0087	0.0096
07:00 PM - 08:00 PM	0.0088	0.0090	0.0085	0.0092	0.0071	0.0098	0.0061
08:00 PM - 09:00 PM	0.0067	0.0064	0.0067	0.0096	0.0089	0.0089	0.0053
09:00 PM - 10:00 PM	0.0083	0.0068	0.0048	0.0087	0.0088	0.0095	0.0093
10:00 PM - 11:00 PM	0.0094	0.0072	0.0078	0.0099	0.0092	0.0094	0.0086
11:00 PM - 12:00 AM	0.0084	0.0083	0.0099	0.0097	0.0094	0.0089	0.0087
12:00 AM - 01:00 AM	0.0074	0.0099	0.0086	0.0093	0.0076	0.0089	0.0099
01:00 AM - 02:00 AM	0.0078	0.0098	0.0097	0.0083	0.0099	0.0099	0.0017
02:00 AM - 03:00 AM	0.0053	0.0098	0.0098	0.0092	0.0088	0.0084	0.0043
03:00 AM - 04:00 AM	0.0099	0.0095	0.0098	0.0095	0.0095	0.0057	0.0035
04:00 AM - 05:00 AM	0.0073	0.0068	0.0076	0.0088	0.0094	0.0057	0.0030
05:00 AM - 06:00 AM	0.0087	0.0051	0.0091	0.0087	0.0086	0.0024	0.0042
06:00 AM - 07:00 AM	0.0078	0.0071	0.0096	0.0096	0.0024	0.0074	0.0045
07:00 AM - 08:00 AM	0.0097	0.0086	0.0087	0.0097	0.0078	0.0097	0.0054
08:00 AM - 09:00 AM	0.0099	0.0096	0.0096	0.0085	0.0064	0.0097	0.0032
09:00 AM - 10:00 AM	0.0077	0.0093	0.0055	0.0071	0.0071	0.0094	0.0052
10:00 AM - 11:00 AM	0.0084	0.0056	0.0049	0.0094	0.0088	0.0079	0.0066
11:00 AM - 12:00 PM	0.0096	0.0027	0.0038	0.0099	0.0099	0.0081	0.0083
12:00 PM - 01:00 PM	0.0073	0.0065	0.0070	0.0094	0.0098	0.0098	0.0081
01:00 PM - 02:00 PM	0.0085	0.0044	0.0073	0.0097	0.0098	0.0083	0.0080
02:00 PM - 03:00 PM	0.0072	0.0037	0.0076	0.0092	0.0086	0.0054	0.0094
Average	0.0083	0.0076	0.0077	0.0090	0.0084	0.0083	0.0066
1hr - Maximum	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099
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)

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Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118710

Date Received : Nov 01, 2024

Date Reported : Nov 07, 2024

Report Number: 3158202-1

Page 1 of 1

Sample Description	Air Quality						
Location	ชุมชนนิคมสร้างตนเอง						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Oct 21, 2024 - Oct 28, 2024						
Measurement by	Chatchai Sukpia						
Time	24118710-15 Oct 21, 2024	24118710-16 Oct 22, 2024	24118710-17 Oct 23, 2024	24118710-18 Oct 24, 2024	24118710-19 Oct 25, 2024	24118710-20 Oct 26, 2024	24118710-21 Oct 27, 2024
10:00 AM - 11:00 AM	0.0085	0.0055	0.0060	0.0090	0.0059	0.0051	0.0042
11:00 AM - 12:00 PM	0.0089	0.0089	0.0069	0.0056	0.0058	0.0049	0.0034
12:00 PM - 01:00 PM	0.0097	0.0083	0.0077	0.0058	0.0051	0.0046	0.0031
01:00 PM - 02:00 PM	0.0120	0.0081	0.0072	0.0053	0.0047	0.0044	0.0084
02:00 PM - 03:00 PM	0.0082	0.0097	0.0078	0.0057	0.0048	0.0045	0.0084
03:00 PM - 04:00 PM	0.0044	0.0092	0.0080	0.0082	0.0079	0.0069	0.0068
04:00 PM - 05:00 PM	0.0074	0.0081	0.0097	0.0083	0.0087	0.0067	0.0067
05:00 PM - 06:00 PM	0.0058	0.0086	0.0099	0.0093	0.0061	0.0042	0.0045
06:00 PM - 07:00 PM	0.0068	0.0080	0.0090	0.0059	0.0056	0.0036	0.0048
07:00 PM - 08:00 PM	0.0086	0.0080	0.0080	0.0053	0.0064	0.0046	0.0060
08:00 PM - 09:00 PM	0.0087	0.0092	0.0074	0.0048	0.0049	0.0036	0.0054
09:00 PM - 10:00 PM	0.0076	0.0094	0.0082	0.0074	0.0041	0.0039	0.0059
10:00 PM - 11:00 PM	0.0090	0.0098	0.0071	0.0079	0.0034	0.0056	0.0065
11:00 PM - 12:00 AM	0.0097	0.0078	0.0091	0.0062	0.0034	0.0039	0.0069
12:00 AM - 01:00 AM	0.0096	0.0068	0.0098	0.0063	0.0035	0.0059	0.0087
01:00 AM - 02:00 AM	0.0085	0.0072	0.0099	0.0062	0.0059	0.0063	0.0045
02:00 AM - 03:00 AM	0.0094	0.0074	0.0098	0.0085	0.0089	0.0062	0.0044
03:00 AM - 04:00 AM	0.0098	0.0068	0.0094	0.0058	0.0094	0.0065	0.0033
04:00 AM - 05:00 AM	0.0078	0.0084	0.0096	0.0073	0.0043	0.0042	0.0041
05:00 AM - 06:00 AM	0.0073	0.0077	0.0097	0.0067	0.0069	0.0043	0.0049
06:00 AM - 07:00 AM	0.0086	0.0091	0.0084	0.0087	0.0065	0.0048	0.0040
07:00 AM - 08:00 AM	0.0096	0.0088	0.0080	0.0090	0.0063	0.0041	0.0035
08:00 AM - 09:00 AM	0.0084	0.0075	0.0081	0.0071	0.0060	0.0048	0.0026
09:00 AM - 10:00 AM	0.0075	0.0062	0.0072	0.0064	0.0046	0.0034	0.0026
Average	0.0084	0.0081	0.0084	0.0069	0.0058	0.0049	0.0052
1hr - Maximum	0.0120	0.0098	0.0099	0.0093	0.0094	0.0069	0.0087
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)

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

Orawan R.

Orawan Rakyong
Scientist (3)

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Life Sciences

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118710

Date Received : Nov 01, 2024

Date Reported : Nov 07, 2024

Report Number: 3158205-1

Page 1 of 1

Sample Description	Air Quality						
Location	สถานีอนามัยบ้านละหารไร่						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Oct 21, 2024 - Oct 28, 2024						
Measurement by	Chatchai Sukpia						
Time	24118710-22 Oct 21, 2024	24118710-23 Oct 22, 2024	24118710-24 Oct 23, 2024	24118710-25 Oct 24, 2024	24118710-26 Oct 25, 2024	24118710-27 Oct 26, 2024	24118710-28 Oct 27, 2024
09:00 AM - 10:00 AM	0.0036	0.0040	0.0055	0.0049	0.0055	0.0039	0.0049
10:00 AM - 11:00 AM	0.0055	0.0041	0.0050	0.0060	0.0078	0.0045	0.0055
11:00 AM - 12:00 PM	0.0020	0.0037	0.0047	0.0074	0.0092	0.0039	0.0035
12:00 PM - 01:00 PM	0.0064	0.0036	0.0058	0.0074	0.0086	0.0033	0.0046
01:00 PM - 02:00 PM	0.0069	0.0035	0.0050	0.0093	0.0081	0.0045	0.0054
02:00 PM - 03:00 PM	0.0094	0.0029	0.0054	0.0093	0.0065	0.0043	0.0056
03:00 PM - 04:00 PM	0.0057	0.0037	0.0054	0.0094	0.0058	0.0044	0.0061
04:00 PM - 05:00 PM	0.0074	0.0032	0.0057	0.0076	0.0059	0.0050	0.0051
05:00 PM - 06:00 PM	0.0054	0.0034	0.0062	0.0095	0.0065	0.0050	0.0055
06:00 PM - 07:00 PM	0.0089	0.0075	0.0094	0.0090	0.0066	0.0048	0.0070
07:00 PM - 08:00 PM	0.0088	0.0091	0.0099	0.0081	0.0076	0.0060	0.0070
08:00 PM - 09:00 PM	0.0095	0.0085	0.0093	0.0088	0.0082	0.0090	0.0054
09:00 PM - 10:00 PM	0.0066	0.0082	0.0085	0.0093	0.0097	0.0083	0.0070
10:00 PM - 11:00 PM	0.0085	0.0096	0.0076	0.0093	0.0098	0.0071	0.0062
11:00 PM - 12:00 AM	0.0064	0.0069	0.0096	0.0090	0.0081	0.0082	0.0061
12:00 AM - 01:00 AM	0.0059	0.0068	0.0072	0.0083	0.0081	0.0065	0.0050
01:00 AM - 02:00 AM	0.0040	0.0057	0.0064	0.0087	0.0067	0.0065	0.0039
02:00 AM - 03:00 AM	0.0035	0.0044	0.0055	0.0068	0.0061	0.0060	0.0036
03:00 AM - 04:00 AM	0.0033	0.0036	0.0046	0.0059	0.0053	0.0036	0.0040
04:00 AM - 05:00 AM	0.0034	0.0033	0.0045	0.0048	0.0049	0.0033	0.0057
05:00 AM - 06:00 AM	0.0032	0.0033	0.0043	0.0044	0.0040	0.0037	0.0062
06:00 AM - 07:00 AM	0.0033	0.0033	0.0042	0.0045	0.0037	0.0037	0.0042
07:00 AM - 08:00 AM	0.0032	0.0041	0.0041	0.0044	0.0033	0.0042	0.0041
08:00 AM - 09:00 AM	0.0039	0.0049	0.0040	0.0052	0.0033	0.0042	0.0048
Average	0.0056	0.0051	0.0062	0.0074	0.0066	0.0052	0.0053
1hr - Maximum	0.0095	0.0096	0.0099	0.0095	0.0098	0.0090	0.0070
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)

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

Orawan R.

Orawan Rakyong
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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong

Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองลลอก 1

Project Location : GNLL

Lot ID: 24118714

Date Received : Oct 31, 2024

Date Reported : Nov 08, 2024

Report Number : 3139540-1

Page 1 of 2

Sample Number 24118714-1 to 7
Parameter Wind Speed / Wind Direction
Location บริเวณสำนักงานเขตประกอบการฯ (GPS 47P 0742968, 1419447)
Sampling Date Oct 21 - Oct 28, 2024
Sampling by Chatchai Sukpia

Time	Oct 21 - Oct 22, 2024			Oct 22 - Oct 23, 2024			Oct 23 - Oct 24, 2024			Oct 24 - Oct 25, 2024			Oct 25 - Oct 26, 2024			Oct 26 - Oct 27, 2024			Oct 27 - Oct 28, 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)	
02:00 PM - 03:00 PM	0.8	211.0	SSW	1.1	16.0	NNE	1.4	269.0	W	0.8	103.0	ESE	0.6	75.0	ENE	0.5	82.0	E	2.0	3.0	N
03:00 PM - 04:00 PM	0.5	274.0	W	0.3	303.0	WNW	1.3	243.0	WSW	0.7	37.0	NE	0.8	3.0	N	0.7	346.0	NNW	1.5	346.0	NNW
04:00 PM - 05:00 PM	0.2	-	-	0.8	118.0	ESE	0.0	-	-	0.6	12.0	NNE	1.3	11.0	N	0.0	-	-	0.0	-	-
05:00 PM - 06:00 PM	0.8	24.0	NNE	0.0	-	-	0.0	-	-	0.0	-	-	0.4	316.0	NW	0.1	-	-	0.0	-	-
06:00 PM - 07:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.9	0.0	N	0.6	343.0	NNW	0.0	-	-
07:00 PM - 08:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
08:00 PM - 09:00 PM	0.3	53.0	NE	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
09:00 PM - 10:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.6	275.0	W	0.0	-	-
10:00 PM - 11:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.2	-	-	1.1	236.0	SW
11:00 PM - 12:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.2	-	-	0.0	-	-
12:00 AM - 01:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.4	104.0	ESE
01:00 AM - 02:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
02:00 AM - 03:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.1	-	-	0.4	359.0	N
03:00 AM - 04:00 AM	0.0	-	-	1.1	0.0	N	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	1.3	108.0	ESE
04:00 AM - 05:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
05:00 AM - 06:00 AM	0.0	-	-	0.0	-	-	1.1	56.0	NE	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
06:00 AM - 07:00 AM	0.0	-	-	0.4	18.0	NNE	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	2.7	111.0	ESE
07:00 AM - 08:00 AM	0.6	20.0	NNE	0.4	46.0	NE	0.6	105.0	ESE	0.3	20.0	NNE	1.3	50.0	NE	0.0	-	-	1.3	119.0	ESE
08:00 AM - 09:00 AM	0.8	0.0	N	0.7	30.0	NNE	4.0	82.0	E	1.3	2.0	N	1.7	4.0	N	2.2	0.0	N	0.0	-	-
09:00 AM - 10:00 AM	0.8	100.0	E	1.2	88.0	E	3.2	143.0	SE	0.8	348.0	NNW	0.8	249.0	WSW	3.5	10.0	N	0.0	-	-
10:00 AM - 11:00 AM	1.2	355.0	N	0.2	-	-	0.3	100.0	E	1.2	359.0	N	0.5	284.0	WNW	3.5	318.0	NW	0.6	28.0	NNE
11:00 AM - 12:00 PM	1.7	75.0	ENE	0.2	-	-	0.3	333.0	NNW	2.0	23.0	NNE	2.7	3.0	N	1.1	342.0	NNW	1.2	64.0	ENE
12:00 PM - 01:00 PM	2.0	69.0	ENE	0.4	126.0	SE	1.9	87.0	E	1.3	165.0	SSE	2.3	4.0	N	2.7	359.0	N	0.8	32.0	NNE
01:00 PM - 02:00 PM	1.7	270.0	W	0.3	251.0	WSW	0.0	-	-	1.5	339.0	NNW	1.1	350.0	N	2.5	0.0	N	0.6	24.0	NNE

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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

Approved by

Sarayuth Jittrantont
Assistant General Manager



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118714

Date Received : Oct 31, 2024

Date Reported : Nov 08, 2024

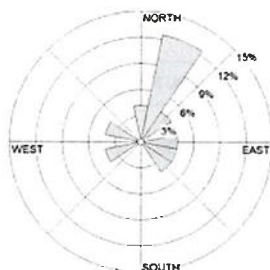
Report Number : 3139540-1

Page 2 of 2

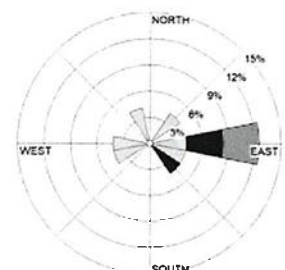
Wind Rose



Date : Oct 21-22, 2024



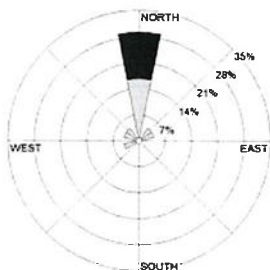
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Date : Oct 23-24, 2024



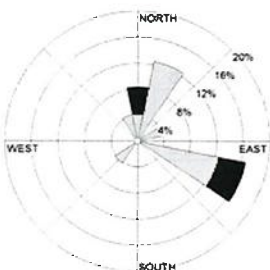
Date : Oct 24-25, 2024



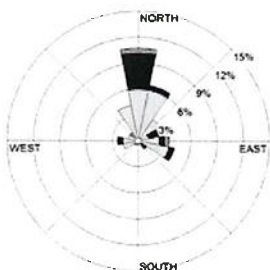
Date : Oct 25-26, 2024



Date : Oct 26-27, 2024



Date : Oct 27-28, 2024



Date : Oct 21-28, 2024

WS (m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	1.79
1.7-3.3	8.33
0.3-1.7	33.93
Calms	55.95

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Approved by

Sarayuth Jitranont
Assistant General Manager



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong

Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองลลอก 1

Project Location : GNLL

Lot ID: 24118714

Date Received :Oct 31, 2024

Date Reported :Nov 08, 2024

Report Number :3139540-1

Page 1 of 2

Sample Number 24118714-8 to 14
Parameter Wind Speed / Wind Direction
Location ชุมชนบ้านสามแยก (GPS 47P 0742172, 1417901)
Sampling Date Oct 21 - Oct 28, 2024
Sampling by Chatchai Sukpia

Time	Oct 21 - Oct 22, 2024			Oct 22 - Oct 23, 2024			Oct 23 - Oct 24, 2024			Oct 24 - Oct 25, 2024			Oct 25 - Oct 26, 2024			Oct 26 - Oct 27, 2024			Oct 27 - Oct 28, 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)	
03:00 PM - 04:00 PM	0.3	190.0	S	0.3	229.0	SW	5.2	94.0	E	3.5	188.0	S	0.6	207.0	SSW	2.8	254.0	WSW	1.1	187.0	S
04:00 PM - 05:00 PM	0.6	260.0	W	0.3	9.0	N	0.2	-	-	1.0	169.0	S	0.2	-	-	1.1	240.0	WSW	1.1	258.0	WSW
05:00 PM - 06:00 PM	1.2	46.0	NE	0.3	39.0	NE	0.2	-	-	0.6	89.0	E	0.2	-	-	0.7	250.0	WSW	0.3	198.0	SSW
06:00 PM - 07:00 PM	0.4	56.0	NE	0.0	-	-	0.0	-	-	0.0	-	-	0.3	260.0	W	0.6	286.0	WNW	0.0	-	-
07:00 PM - 08:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.9	189.0	S	0.3	196.0	SSW	0.0	-	-
08:00 PM - 09:00 PM	0.0	-	-	0.4	359.0	N	0.0	-	-	0.0	-	-	0.0	-	-	0.6	183.0	S	0.0	-	-
09:00 PM - 10:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.5	190.0	S	0.2	-	-
10:00 PM - 11:00 PM	0.0	-	-	0.5	13.0	NNE	0.0	-	-	0.0	-	-	0.4	359.0	N	0.0	-	-	0.0	-	-
11:00 PM - 12:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.8	28.0	NNE
12:00 AM - 01:00 AM	0.0	-	-	0.0	-	-	0.3	6.0	N	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
01:00 AM - 02:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.2	-	-	0.0	-	-	0.0	-	-	0.1	-	-
02:00 AM - 03:00 AM	0.4	16.0	NNE	0.5	23.0	NNE	0.0	-	-	0.0	-	-	0.4	13.0	NNE	0.4	327.0	NNW	0.2	-	-
03:00 AM - 04:00 AM	0.0	-	-	1.8	5.0	N	0.1	-	-	0.0	-	-	0.0	-	-	0.3	286.0	WNW	1.1	25.0	NNE
04:00 AM - 05:00 AM	0.0	-	-	0.2	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.2	-	-
05:00 AM - 06:00 AM	0.4	319.0	NW	0.9	357.0	N	0.2	-	-	0.0	-	-	0.4	7.0	N	0.0	-	-	0.0	-	-
06:00 AM - 07:00 AM	0.0	-	-	0.7	359.0	N	0.5	24.0	NNE	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
07:00 AM - 08:00 AM	0.7	34.0	NE	0.4	348.0	NNW	0.5	20.0	NNE	0.0	-	-	0.3	309.0	NW	0.0	-	-	0.3	66.0	ENE
08:00 AM - 09:00 AM	0.5	303.0	WNW	0.3	45.0	NE	1.1	359.0	N	0.0	-	-	0.4	330.0	NNW	0.5	13.0	NNE	0.1	-	-
09:00 AM - 10:00 AM	0.8	46.0	NE	1.3	359.0	N	2.0	359.0	N	0.6	21.0	NNE	0.8	271.0	W	0.5	27.0	NNE	0.0	-	-
10:00 AM - 11:00 AM	0.4	327.0	NNW	0.2	-	-	2.2	6.0	N	1.0	359.0	N	1.0	187.0	S	1.4	329.0	NNW	0.6	82.0	E
11:00 AM - 12:00 PM	1.0	75.0	ENE	2.3	17.0	NNE	3.3	49.0	NE	1.2	345.0	NNW	1.6	266.0	W	1.5	233.0	SW	0.3	64.0	ENE
12:00 PM - 01:00 PM	0.8	207.0	SSW	1.3	171.0	S	1.3	279.0	W	0.3	24.0	NNE	0.8	233.0	SW	1.2	230.0	SW	1.2	86.0	E
01:00 PM - 02:00 PM	2.5	71.0	ENE	0.7	184.0	S	0.9	39.0	NE	0.3	245.0	WSW	0.8	199.0	SSW	1.5	205.0	SSW	0.6	32.0	NNE
02:00 PM - 03:00 PM	0.6	191.0	S	0.5	210.0	SSW	1.1	51.0	NE	0.8	56.0	NE	0.9	270.0	W	1.1	258.0	WSW	0.8	24.0	NNE

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jitranont
Assistant General Manager



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118714

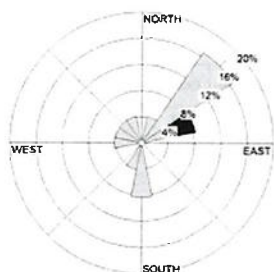
Date Received : Oct 31, 2024

Date Reported : Nov 08, 2024

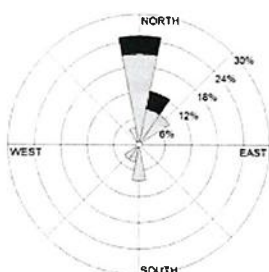
Report Number : 3139540-1

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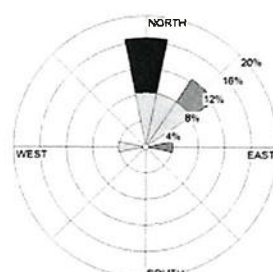
Wind Rose



Date : Oct 21-22, 2024



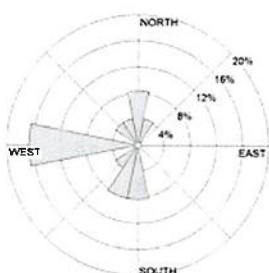
Date : Oct 22-23, 2024



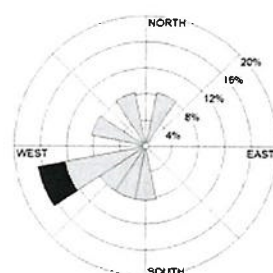
Date : Oct 23-24, 2024



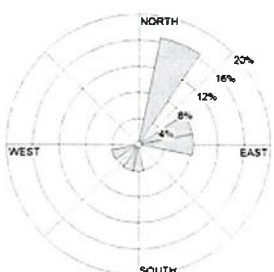
Date : Oct 24-25, 2024



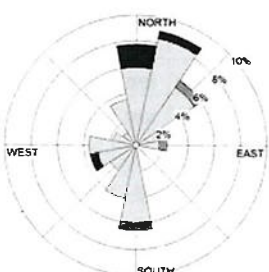
Date : Oct 25-26, 2024



Date : Oct 26-27, 2024



Date : Oct 27-28, 2024



Date : Oct 21-28, 2024

WS (m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	1.79
1.7-3.3	3.57
0.3-1.7	48.81
Calms	45.83

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

Approved by

Sarayuth Jittranont
Assistant General Manager



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118714

Date Received : Oct 31, 2024

Date Reported : Nov 08, 2024

Report Number : 3139540-1

Page 1 of 2

Sample Number 24118714-15 to 21
Parameter Wind Speed / Wind Direction
Location ขุมชนนิคมสร้างตนเอง
Sampling Date Oct 21 - Oct 28, 2024
Sampling by Chatchai Sukpia

Time	Oct 21 - Oct 22, 2024			Oct 22 - Oct 23, 2024			Oct 23 - Oct 24, 2024			Oct 24 - Oct 25, 2024			Oct 25 - Oct 26, 2024			Oct 26 - Oct 27, 2024			Oct 27 - Oct 28, 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)	
10:00 AM - 11:00 AM	0.6	325.0	NW	0.2	-	-	0.6	82.0	E	1.6	64.0	ENE	1.4	308.0	NW	0.6	280.0	W	0.4	278.0	W
11:00 AM - 12:00 PM	0.3	58.0	ENE	0.4	330.0	NNW	0.8	132.0	SE	0.2	-	-	2.4	346.0	NNW	1.5	319.0	NW	0.9	326.0	NW
12:00 PM - 01:00 PM	0.5	298.0	WNW	0.9	323.0	NW	0.7	210.0	SSW	2.2	287.0	WNW	0.6	62.0	ENE	0.3	270.0	W	1.4	296.0	WNW
01:00 PM - 02:00 PM	0.1	-	-	1.8	43.0	NE	1.2	110.0	ESE	2.4	269.0	W	0.4	210.0	SSW	0.8	335.0	NNW	1.7	347.0	NNW
02:00 PM - 03:00 PM	1.4	184.0	S	0.4	148.0	SSE	0.3	220.0	SW	0.3	308.0	NW	0.8	328.0	NNW	1.4	315.0	NW	0.8	305.0	NW
03:00 PM - 04:00 PM	0.6	136.0	SE	1.9	109.0	ESE	0.4	228.0	SW	0.2	-	-	1.9	316.0	NW	0.7	298.0	WNW	0.8	294.0	WNW
04:00 PM - 05:00 PM	0.0	-	-	0.4	324.0	NW	0.0	-	-	2.6	117.0	ESE	2.1	322.0	NW	1.6	318.0	NW	1.5	337.0	NNW
05:00 PM - 06:00 PM	0.0	-	-	0.0	-	-	1.2	242.0	WSW	0.3	156.0	SSE	0.2	-	-	2.3	300.0	WNW	1.6	312.0	NW
06:00 PM - 07:00 PM	0.8	64.0	ENE	1.0	55.0	NE	0.8	246.0	WSW	1.6	138.0	SE	0.2	-	-	0.9	270.0	W	1.1	313.0	NW
07:00 PM - 08:00 PM	0.0	-	-	0.0	-	-	0.7	248.0	WSW	0.8	140.0	SE	0.0	-	-	0.5	325.0	NW	0.6	316.0	NW
08:00 PM - 09:00 PM	0.0	-	-	0.0	-	-	0.6	248.0	WSW	0.9	148.0	SSE	0.9	326.0	NW	0.4	327.0	NNW	0.2	-	-
09:00 PM - 10:00 PM	0.0	-	-	0.0	-	-	0.7	252.0	WSW	0.8	148.0	SSE	0.9	326.0	NW	0.5	329.0	NNW	0.7	319.0	NW
10:00 PM - 11:00 PM	0.0	-	-	0.7	0.0	N	0.8	259.0	W	0.6	150.0	SSE	0.8	328.0	NNW	0.3	328.0	NNW	0.0	-	-
11:00 PM - 12:00 AM	0.0	-	-	0.0	-	-	0.8	225.0	SW	0.0	-	-	0.9	328.0	NNW	0.0	-	-	0.8	330.0	NNW
12:00 AM - 01:00 AM	1.3	339.0	NNW	0.0	-	-	0.2	-	-	0.6	158.0	SSE	0.7	330.0	NNW	1.1	354.0	N	0.9	341.0	NNW
01:00 AM - 02:00 AM	0.8	339.0	NNW	0.0	-	-	0.4	325.0	NW	0.8	157.0	SSE	0.8	332.0	NNW	0.6	352.0	N	0.7	348.0	NNW
02:00 AM - 03:00 AM	0.9	338.0	NNW	0.3	356.0	N	0.0	-	-	1.1	82.0	E	0.0	-	-	0.0	-	-	0.3	346.0	NNW
03:00 AM - 04:00 AM	0.7	338.0	NNW	0.0	-	-	0.3	353.0	N	1.0	84.0	E	0.8	336.0	NNW	2.7	324.0	NW	1.6	321.0	NW
04:00 AM - 05:00 AM	0.0	-	-	0.3	352.8	N	0.0	-	-	1.1	81.0	E	0.8	336.0	NNW	1.3	322.0	NW	1.2	311.0	NW
05:00 AM - 06:00 AM	0.0	-	-	1.2	348.0	NNW	0.6	360.0	N	0.8	81.0	E	0.9	331.0	NNW	0.8	316.0	NW	1.1	96.0	E
06:00 AM - 07:00 AM	0.0	-	-	0.9	360.0	N	1.3	346.0	NNW	0.9	80.0	E	1.2	360.0	N	0.6	324.0	NW	0.9	98.0	E
07:00 AM - 08:00 AM	0.0	-	-	0.4	323.0	NW	2.7	106.0	ESE	0.9	80.0	E	0.7	360.0	N	0.9	239.0	WSW	0.3	86.0	E
08:00 AM - 09:00 AM	0.0	-	-	1.6	202.0	SSW	0.4	14.0	NNE	1.8	263.0	W	1.7	248.0	WSW	1.1	323.0	NW	0.8	90.0	E
09:00 AM - 10:00 AM	1.5	246.0	WSW	1.8	348.0	NNW	0.8	309.0	NW	3.1	336.0	NNW	0.5	324.0	NW	1.3	327.0	NNW	1.2	102.0	ESE

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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

Approved by

Sarayuth Jitranont
Assistant General Manager



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118714

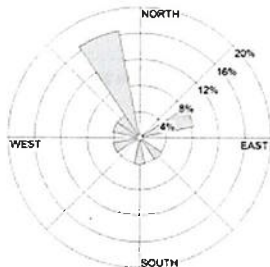
Date Received : Oct 31, 2024

Date Reported : Nov 08, 2024

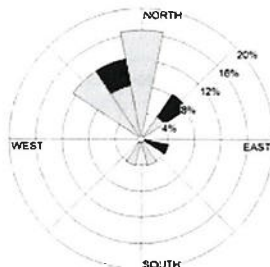
Report Number : 3139540-1

Page 2 of 2

Wind Rose



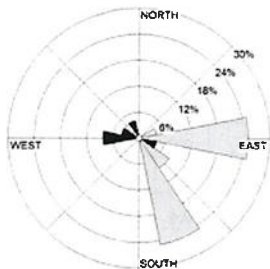
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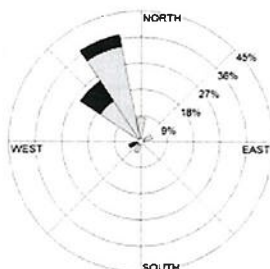
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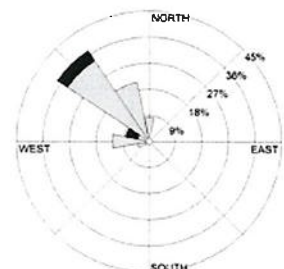
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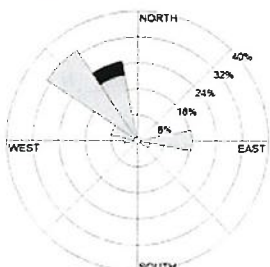
Date : Oct 24-25, 2024



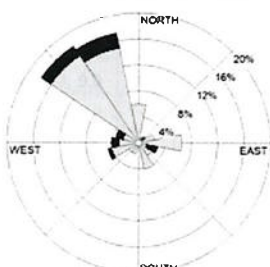
Date : Oct 25-26, 2024



Date : Oct 26-27, 2024



Date : Oct 27-28, 2024



Date : Oct 21-28, 2024

WS (m/s)	%
> 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	0.00
1.7-3.3	9.52
0.3-1.7	68.45
Calms	22.02

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Approved by

Sarayuth Jittrantont
Assistant General Manager



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118714

Date Received : Oct 31, 2024

Date Reported : Nov 08, 2024

Report Number : 3139540-1

Page 1 of 2

Sample Number 24118714-22 to 28
Parameter Wind Speed / Wind Direction
Location สถานีอนามัยบ้านหนองละลอก
Sampling Date Oct 21 - Oct 28, 2024
Sampling by Chatchai Sukpia

Time	Oct 21 - Oct 22, 2024			Oct 22 - Oct 23, 2024			Oct 23 - Oct 24, 2024			Oct 24 - Oct 25, 2024			Oct 25 - Oct 26, 2024			Oct 26 - Oct 27, 2024			Oct 27 - Oct 28, 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)	
09:00 AM - 10:00 AM	1.0	345.0	NNW	1.9	279.0	W	1.9	23.0	NNE	2.8	8.0	N	1.2	323.0	NW	1.7	224.0	SW	2.1	215.0	SW
10:00 AM - 11:00 AM	2.4	40.0	NE	1.7	339.0	NNW	1.3	74.0	ENE	3.2	344.0	NNW	2.0	295.0	WNW	0.9	263.0	W	3.4	310.0	NW
11:00 AM - 12:00 PM	0.0	-	-	2.0	332.0	NNW	0.5	156.0	SSE	1.6	337.0	NNW	2.2	8.0	N	2.6	215.0	SW	3.4	236.0	SW
12:00 PM - 01:00 PM	0.4	248.0	WSW	1.5	52.0	NE	1.4	56.0	NE	1.9	322.0	NW	1.3	359.0	N	2.2	281.0	W	1.5	315.0	NW
01:00 PM - 02:00 PM	1.1	145.0	SE	4.9	157.0	SSE	0.6	168.0	SSE	0.0	-	-	1.7	279.0	W	1.0	262.0	W	1.5	248.0	WSW
02:00 PM - 03:00 PM	0.3	117.0	ESE	0.4	118.0	ESE	1.8	177.0	S	0.1	-	-	1.3	269.0	W	1.3	246.0	WSW	3.4	239.0	WSW
03:00 PM - 04:00 PM	0.0	-	-	1.1	333.0	NNW	0.7	237.0	WSW	1.6	78.0	ENE	0.0	-	-	1.7	267.0	W	1.1	283.0	WNW
04:00 PM - 05:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.2	-	-	0.8	249.0	WSW	1.8	249.0	WSW	0.6	258.0	WSW
05:00 PM - 06:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.7	94.0	E	0.7	249.0	WSW	0.3	218.0	SW	0.0	-	-
06:00 PM - 07:00 PM	0.0	-	-	0.0	-	-	0.3	191.0	S	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
07:00 PM - 08:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
08:00 PM - 09:00 PM	0.0	-	-	0.0	-	-	0.3	190.0	S	0.0	-	-	0.0	-	-	0.2	-	-	0.0	-	-
09:00 PM - 10:00 PM	0.0	-	-	0.0	-	-	0.7	191.0	S	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
10:00 PM - 11:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.4	98.0	E	0.0	-	-	0.0	-	-	0.0	-	-
11:00 PM - 12:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.1	-	-	0.6	272.0	W	0.4	294.0	WNW	0.4	279.0	W
12:00 AM - 01:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.7	98.0	E	0.0	-	-	0.0	-	-	0.0	-	-
01:00 AM - 02:00 AM	0.6	346.0	NNW	0.0	-	-	0.2	-	-	0.3	22.0	NNE	0.0	-	-	0.0	-	-	0.7	310.0	NW
02:00 AM - 03:00 AM	0.0	-	-	0.9	338.0	NNW	0.0	-	-	0.5	22.0	NNE	0.0	-	-	0.0	-	-	0.7	356.0	N
03:00 AM - 04:00 AM	0.0	-	-	0.4	294.0	WNW	0.0	-	-	0.4	22.0	NNE	0.0	-	-	0.0	-	-	0.0	-	-
04:00 AM - 05:00 AM	0.0	-	-	0.1	-	-	0.1	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
05:00 AM - 06:00 AM	0.0	-	-	0.4	303.0	WNW	0.8	301.0	WNW	0.0	-	-	0.0	-	-	0.0	-	-	0.7	32.0	NNE
06:00 AM - 07:00 AM	0.0	-	-	1.0	264.0	W	0.6	343.0	NNW	0.2	-	-	0.0	-	-	0.0	-	-	0.2	-	-
07:00 AM - 08:00 AM	0.0	-	-	1.5	343.0	NNW	1.3	352.0	N	0.0	-	-	0.0	-	-	0.0	-	-	0.6	36.0	NE
08:00 AM - 09:00 AM	0.5	255.0	WSW	2.0	325.0	NW	2.5	339.0	NNW	1.1	341.0	NNW	3.2	268.0	W	0.0	-	-	0.3	44.0	NE

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jittranont
Assistant General Manager



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118714

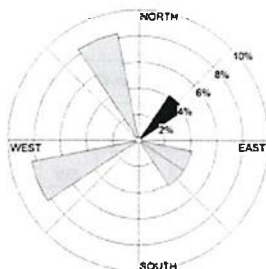
Date Received : Oct 31, 2024

Date Reported : Nov 08, 2024

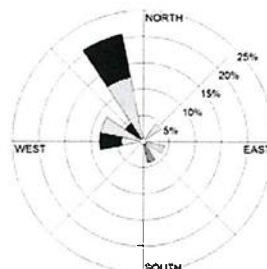
Report Number : 3139540-1

Page 2 of 2

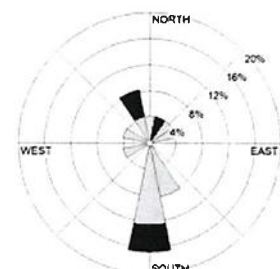
Wind Rose



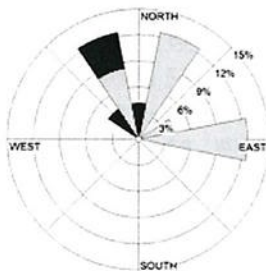
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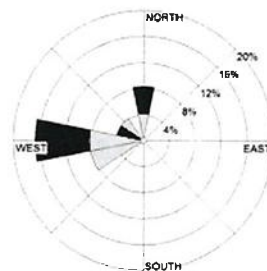
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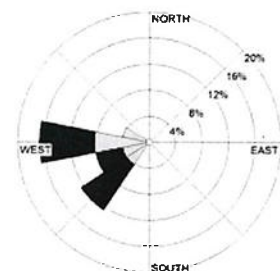
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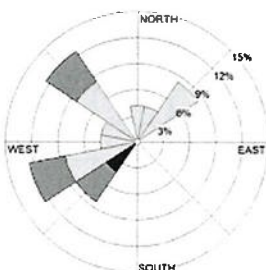
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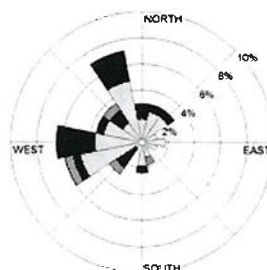
Date : Oct 25-26, 2024



Date : Oct 26-27, 2024



Date : Oct 27-28, 2024



Date : Oct 21-28, 2024

WS (m/s)	%
> 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	2.38
1.7-3.3	12.50
0.3-1.7	32.74
Calms	52.38

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Approved by

Sarayuth Jitranont
Assistant General Manager

ภาคผนวก ค-2

ผลการตรวจวัดคุณภาพอากาศจากปล่องระบาย



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118721

Date Received :Oct 25, 2024

Date Reported :Oct 30, 2024

Report Number :3139549-1

Page 1 of 1

Sample Number 24118721-1
Sample Description Emission from Stationary Source
Location ปล่อง HRSG 11
Measurement Date Oct 25, 2024

Stack Description

Ambient Temperature	31.4 °C	Diameter	3.00 m	Oxygen	14.09 %
Ambient Pressure	751.7 mmHg	Shape	Circle	Carbon dioxide	3.88 %
Type of Process	Combustion	Stack Temperature	95 °C	Gas Velocity	19.64 m/s
Type of Fuel	Natural Gas	Moisture	8.43 %	Flow Rate	366437 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Sulfur Dioxide (ppm)	
				at Actual O ₂	at 7% O ₂	at Actual O ₂	at 7% O ₂
1	10:30 AM - 10:50 AM	14.10	3.88	11.83	24.18	0.11	0.22
2	10:51 AM - 11:11 AM	14.08	3.88	11.98	24.42	0.11	0.22
3	11:12 AM - 11:32 AM	14.09	3.87	12.08	24.67	0.10	0.21
Average (ppm)		14.09	3.88	11.96	24.42	0.11	0.22
Guideline ^{1/} (ppm)				-	60	-	6
Guideline ^{2/} (ppm)				-	120	-	20
Result (mg/Nm ³)				22.51	45.95	0.28	0.57
Emission Rate at Actual O ₂ (g/s)				2.2912		0.0286	
Guideline ^{1/} (g/s)				5.92		0.82	
Method				US EPA Method 7E		US EPA Method 6C	

Sampled By : Saksit Phaisanphisut

Guideline : ^{1/}Environmental Impact Assessment Report of Gulf JP NLL Co., Ltd.

^{2/}Notification of the Ministry of Natural Resources and Environment, 2023 (B.E. 2566) on Emission Standard from Power Plants.

Technical Management

Wichan Choonharat
Manager
ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jittranont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 24118721
Date Received : Oct 25, 2024
Date Reported : Oct 30, 2024
Report Number : 3139549-1

Page 1 of 1

Sample Number 24118721-1
Sample Description Emission from Stationary Source
Location ปล่อง HRSG 11
Measurement Date Oct 25, 2024

Stack Description							
Ambient Temperature	31.4	°C	Diameter	3.00	m	Oxygen	14.09 %
Ambient Pressure	751.7	mmHg	Shape	Circle		Carbon dioxide	3.88 %
Type of Process	Combustion		Stack Temperature	95	°C	Gas Velocity	19.64 m/s
Type of Fuel	Natural Gas		Moisture	8.43	%	Flow Rate	366437 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Carbon Monoxide (ppm)	
				at Actual O ₂	At 7% O ₂
1	10:30 AM - 10:50 AM	14.10	3.88	0.23	0.46
2	10:51 AM - 11:11 AM	14.08	3.88	0.20	0.41
3	11:12 AM - 11:32 AM	14.09	3.87	0.26	0.54
Average (ppm)		14.09	3.88	0.23	0.47
Guideline (ppm)				-	690
Result (mg/Nm ³)				0.26	0.54
Emission Rate at Actual O ₂ (g/s)				0.0269	
Method				US EPA Method 10	

Sampled By : Saksit Phaisanphisut
Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Technical Management

Wichan Choonharat

Wichan Choonharat
Manager

ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jittranont

Sarayuth Jittranont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118729

Date Received : Oct 25, 2024

Date Reported : Nov 01, 2024

Report Number: 3139588-1

Page 1 of 2

Sample Number 24118729-1
Sampled Date Oct 25, 2024
Sample Description Emission from Stationary Source
Location ปล่อง HRSG 11 (GPS 47P 0744085, 1818868)
Date Analysis Commenced Oct 28, 2024
Condition of Sample Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	752	mmHg	Diameter	3.00	m	Oxygen	14.1	%
Ambient Temperature	31.4	°C	Shape	Circle		Carbon Dioxide	3.9	%
Type of Process	Combustion		Stack Temperature	95.0	°C	Gas Velocity	19.7	m/s
Type of Fuel	Natural Gas		Moisture	8.45	%	Flow Rate (Actual O2)	366852	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Result at 14.1 % O ₂	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing										
Total Suspended Particulate	10:30 AM - 11:30 AM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Rayong

Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NLL Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2023 (B.E. 2566) on Emission Standard from Power Plants.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Changchon.

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118729

Date Received : Oct 25, 2024

Date Reported : Nov 01, 2024

Report Number: 3139588-1

Page 2 of 2

Sample Number	24118729-1
Sampled Date	Oct 25, 2024
Sample Description	Emission from Stationary Source
Location	ปล่อง HRSG 11 (GPS 47P 0744085, 1818868)
Date Analysis Commenced	Oct 28, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	752	mmHg	Diameter	3.00	m	Oxygen	14.1	%
Ambient Temperature	31.4	°C	Shape	Circle		Carbon Dioxide	3.9	%
Type of Process	Combustion		Stack Temperature	95.0	°C	Gas Velocity	19.7	m/s
Type of Fuel	Natural Gas		Moisture	8.45	%	Flow Rate (Actual O2)	366852	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate *	10:30 AM - 11:30 AM	g/s	-	-	<0.051	1.58	-	Calculated	Rayong

Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NLL Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2023 (B.E. 2566) on Emission Standard from Power Plants.

Sampling By : Natthapon Jiengwareewong ทะเบียนเลขที่ ว-323-จ-0013

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 24118727
Date Received :Oct 25, 2024
Date Reported :Oct 30, 2024
Report Number :3139550-1

Page 1 of 1

Sample Number 24118727-1
Sample Description Emission from Stationary Source
Location ปล่อง HRSG 12
Measurement Date Oct 25, 2024

Stack Description							
Ambient Temperature	31.4	°C	Diameter	3.00	m	Oxygen	14.36 %
Ambient Pressure	751.7	mmHg	Shape	Circle		Carbon dioxide	3.96 %
Type of Process	Combustion		Stack Temperature	100	°C	Gas Velocity	19.89 m/s
Type of Fuel	Natural Gas		Moisture	9.84	%	Flow Rate	360626 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Sulfur Dioxide (ppm)	
				at Actual O ₂	at 7% O ₂	at Actual O ₂	at 7% O ₂
1	10:50 AM - 11:10 AM	14.32	3.97	13.26	28.00	0.03	0.06
2	11:11 AM - 11:31 AM	14.39	3.96	13.93	29.75	0.03	0.07
3	11:32 AM - 11:52 AM	14.37	3.96	13.91	29.60	0.03	0.07
Average (ppm)		14.36	3.96	13.70	29.12	0.03	0.07
Guideline ^{1/} (ppm)				-	60	-	6
Guideline ^{2/} (ppm)				-	120	-	20
Result (mg/Nm ³)				25.78	54.78	0.08	0.17
Emission Rate at Actual O ₂ (g/s)				2.5822		0.0082	
Guideline ^{1/} (g/s)				5.92		0.82	
Method				US EPA Method 7E		US EPA Method 6C	

Sampled By : Sathapron Thakarw

Guideline : ^{1/}Environmental Impact Assessment Report of Gulf JP NLL Co., Ltd.

^{2/}Notification of the Ministry of Natural Resources and Environment, 2023 (B.E. 2566) on Emission Standard from Power Plants.

Technical Management

Wichan Choonharat
Manager
ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jittrantont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118727

Date Received : Oct 25, 2024

Date Reported : Oct 30, 2024

Report Number : 3139550-1

Page 1 of 1

Sample Number 24118727-1
Sample Description Emission from Stationary Source
Location ปล่อง HRSG 12
Measurement Date Oct 25, 2024

Stack Description

Ambient Temperature	31.4 °C	Diameter	3.00 m	Oxygen	14.36 %
Ambient Pressure	751.7 mmHg	Shape	Circle	Carbon dioxide	3.96 %
Type of Process	Combustion	Stack Temperature	100 °C	Gas Velocity	19.89 m/s
Type of Fuel	Natural Gas	Moisture	9.84 %	Flow Rate	360626 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Carbon Monoxide (ppm)	
				at Actual O ₂	At 7% O ₂
1	10:50 AM - 11:10 AM	14.32	3.97	3.21	6.77
2	11:11 AM - 11:31 AM	14.39	3.96	2.79	5.95
3	11:32 AM - 11:52 AM	14.37	3.96	2.61	5.55
Average (ppm)		14.36	3.96	2.87	6.09
Guideline (ppm)				-	690
Result (mg/Nm ³)				3.28	6.97
Emission Rate at Actual O ₂ (g/s)				0.3289	
Method				US EPA Method 10	

Sampled By : Sathapron Thakarw

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Technical Management

Wichan Choonharat

Wichan Choonharat
Manager

ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jittrantont

Sarayuth Jittrantont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118730

Date Received : Oct 25, 2024

Date Reported : Nov 01, 2024

Report Number: 3139581-1

Page 1 of 2

Sample Number	24118730-1
Sampled Date	Oct 25, 2024
Sample Description	Emission from Stationary Source
Location	ปล่อง HRSG 12
Date Analysis Commenced	Oct 28, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	752	mmHg	Diameter	3.00	m	Oxygen	14.4	%
Ambient Temperature	31.4	°C	Shape	Circle		Carbon Dioxide	4.0	%
Type of Process	Combustion		Stack Temperature	100	°C	Gas Velocity	19.9	m/s
Type of Fuel	Natural Gas		Moisture	9.86	%	Flow Rate (Actual O2)	360541	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Result at 14.4 % O ₂	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing										
Total Suspended Particulate	10:50 AM - 11:32 AM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Rayong

Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NLL Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2023 (B.E. 2566) on Emission Standard from Power Plants.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118730

Date Received : Oct 25, 2024

Date Reported : Nov 01, 2024

Report Number: 3139581-1

Page 2 of 2

Sample Number	24118730-1
Sampled Date	Oct 25, 2024
Sample Description	Emission from Stationary Source
Location	ปล่อง HRSG 12
Date Analysis Commenced	Oct 28, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	752	mmHg	Diameter	3.00	m	Oxygen	14.4	%
Ambient Temperature	31.4	°C	Shape	Circle		Carbon Dioxide	4.0	%
Type of Process	Combustion		Stack Temperature	100	°C	Gas Velocity	19.9	m/s
Type of Fuel	Natural Gas		Moisture	9.86	%	Flow Rate (Actual O2)	360541	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate *	10:50 AM - 11:32 AM	g/s	-	-	<0.050	1.58	-	Calculated	Rayong

Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NLL Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2023 (B.E. 2566) on Emission Standard from Power Plants.

Sampling By : Santi Chaichana ทะเบียนเลขที่ ๖-323-๖-0061

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0029

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 2443435

Date Received : Dec 19, 2024
Date Reported : Jan 03, 2025
Report Number : 2969237-1

Page 1 of 4

Sample Number : 2443435-1
Sampled Date : Dec 19, 2024
Sample Description : Emission from Stationary Source
Location : ปล่อง HRSG 11
Parameter : NOx

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual O2		Corrected Value at 7% O2		Difference
		Start	Stop	CEMs (ppm)	RM (ppm)	CEMs (ppm)	RM (ppm)	
1	19 Dec 24	10:00	10:20	20.37	20.83	47.16	47.13	-0.03
2	19 Dec 24	10:21	10:41	20.43	21.06	47.37	47.65	0.28
3	19 Dec 24	10:42	11:02	20.26	21.11	47.03	47.77	0.74
4*	19 Dec 24	11:03	11:23	20.21	21.26	46.97	48.12	1.15
5	19 Dec 24	11:24	11:44	20.19	21.14	47.00	47.88	0.88
6	19 Dec 24	11:45	12:05	20.94	21.79	48.86	49.36	0.50
7	19 Dec 24	12:06	12:26	21.49	22.29	49.97	50.34	0.37
8	19 Dec 24	12:27	12:47	21.81	22.80	50.67	51.34	0.67
9	19 Dec 24	12:48	13:08	22.06	23.02	51.30	51.76	0.46
10	19 Dec 24	13:09	13:29	21.53	22.64	49.95	50.68	0.73
11*	19 Dec 24	13:30	13:50	19.81	19.96	46.03	44.61	-1.42
12*	19 Dec 24	13:51	14:11	19.82	19.97	46.15	44.71	-1.45
Average						48.81	49.32	0.51
Confidence Coefficient (CC)								0.22
Relative Accuracy (Compared with RM) (%)								1.48
Relative Accuracy Criteria ^{1/} (Compared with RM)								≤ 20%

Reference Method : US EPA Method 7E

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of NOx is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 2 (PS-2)

RA Result is within Criteria

Technical Management


Wichan Choonharat
Manager
ทะเบียนเลขที่ ว-204-ค-0006

Approved by


Sarayuth Jittrantont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 2443435

Date Received : Dec 19, 2024
Date Reported : Jan 03, 2025
Report Number : 2969237-1

Page 2 of 4

Sample Number : 2443435-1
Sampled Date : Dec 19, 2024
Sample Description : Emission from Stationary Source
Location : ปล่อง HRSG 11
Parameter : SO₂

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual O ₂		Corrected Value at 7% O ₂		Difference
		Start	Stop	CEMs (ppm)	RM (ppm)	CEMs (ppm)	RM (ppm)	
1*	19 Dec 24	10:00	10:20	0.00	0.12	0.00	0.28	0.28
2*	19 Dec 24	10:21	10:41	0.00	0.12	0.00	0.27	0.27
3	19 Dec 24	10:42	11:02	0.00	0.12	0.00	0.27	0.27
4	19 Dec 24	11:03	11:23	0.00	0.11	0.00	0.25	0.25
5	19 Dec 24	11:24	11:44	0.00	0.11	0.00	0.24	0.24
6	19 Dec 24	11:45	12:05	0.00	0.11	0.00	0.25	0.25
7*	19 Dec 24	12:06	12:26	0.00	0.12	0.00	0.27	0.27
8	19 Dec 24	12:27	12:47	0.00	0.12	0.00	0.26	0.26
9	19 Dec 24	12:48	13:08	0.00	0.11	0.00	0.24	0.24
10	19 Dec 24	13:09	13:29	0.00	0.10	0.00	0.22	0.22
11	19 Dec 24	13:30	13:50	0.00	0.12	0.00	0.26	0.26
12	19 Dec 24	13:51	14:11	0.00	0.11	0.00	0.25	0.25
Average						0.00	0.25	0.25
Confidence Coefficient (CC)								0.01
Relative Accuracy (Compared with Emission Standard : 6 ppm) (%)								4.32
Relative Accuracy Criteria ^{1/} (Compared with Emission Standard)								≤ 10%

Reference Method : US EPA Method 6C

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of SO₂ is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 2 (PS-2) compared with Emission Standard 6 ppm at 7%O₂
RA Result is within Criteria

Technical Management


Wichan Choonharat
Manager
ทะเบียนเลขที่ ว-204-ค-0006

Approved by


Sarayuth Jittrantont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 2443435

Date Received : Dec 19, 2024
Date Reported : Jan 03, 2025
Report Number : 2969237-1

Page 3 of 4

Sample Number : 2443435-1
Sampled Date : Dec 19, 2024
Sample Description : Emission from Stationary Source
Location : ปล่อง HRSG 11
Parameter : CO

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual O2		Corrected Value at 7% O2		Difference
		Start	Stop	CEMs (ppm)	RM (ppm)	CEMs (ppm)	RM (ppm)	
1*	19 Dec 24	10:00	10:20	0.66	2.77	1.53	6.26	4.73
2*	19 Dec 24	10:21	10:41	0.67	2.20	1.56	4.98	3.43
3*	19 Dec 24	10:42	11:02	0.66	1.86	1.53	4.22	2.69
4	19 Dec 24	11:03	11:23	0.63	1.63	1.46	3.69	2.23
5	19 Dec 24	11:24	11:44	0.61	1.48	1.43	3.36	1.93
6	19 Dec 24	11:45	12:05	0.62	1.34	1.44	3.03	1.59
7	19 Dec 24	12:06	12:26	0.64	1.23	1.49	2.78	1.28
8	19 Dec 24	12:27	12:47	0.69	1.15	1.59	2.58	0.99
9	19 Dec 24	12:48	13:08	0.66	1.08	1.54	2.43	0.89
10	19 Dec 24	13:09	13:29	0.68	1.02	1.58	2.29	0.71
11	19 Dec 24	13:30	13:50	0.66	0.99	1.54	2.21	0.68
12	19 Dec 24	13:51	14:11	0.66	0.92	1.54	2.07	0.53
Average						1.51	2.72	1.20
Confidence Coefficient (CC)								0.46
Relative Accuracy (Compared with Emission Standard : 690 ppm) (%)								0.24
Relative Accuracy Criteria ^{1/} (Compared with Emission Standard)								≤ 5%

Reference Method : US EPA Method 10

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of CO is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 4 (PS-4) compared with Emission Standard 690 ppm at 7%O2
RA Result is within Criteria

Technical Management


Wichan Choonharat
Manager
ทะเบียนเลขที่ ว-204-ค-0006

Approved by


Sarayuth Jittrantont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalo, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 2443435

Date Received : Dec 19, 2024

Date Reported : Jan 03, 2025

Report Number : 2969237-1

Page 4 of 4

Sample Number 2443435-1
Sampled Date Dec 19, 2024
Sample Description Emission from Stationary Source
Location ปล่อง HRSG 11
Parameter O2

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual		Difference
		Start	Stop	CEMs (%)	RM (%)	
1	19 Dec 24	10:00	10:20	14.90	14.76	-0.14
2	19 Dec 24	10:21	10:41	14.91	14.76	-0.15
3	19 Dec 24	10:42	11:02	14.91	14.76	-0.16
4	19 Dec 24	11:03	11:23	14.92	14.76	-0.16
5	19 Dec 24	11:24	11:44	14.93	14.76	-0.17
6	19 Dec 24	11:45	12:05	14.94	14.76	-0.18
7	19 Dec 24	12:06	12:26	14.92	14.74	-0.18
8	19 Dec 24	12:27	12:47	14.92	14.73	-0.19
9	19 Dec 24	12:48	13:08	14.92	14.72	-0.20
10*	19 Dec 24	13:09	13:29	14.91	14.69	-0.22
11*	19 Dec 24	13:30	13:50	14.92	14.68	-0.24
12*	19 Dec 24	13:51	14:11	14.93	14.69	-0.24
Average				14.92	14.75	-0.17
Confidence Coefficient (CC)						-
Relative Accuracy (Compared in Actual) (%)						0.17
Relative Accuracy Criteria (%)						≤ 1%

Reference Method : US EPA Method 3A

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of O2 is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 3 (PS-3)

RA Result is within Criteria

Sampled By : Sathapron Thakarw

Technical Management

Wichan Choonharat

Manager

ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jitranont

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 2443437

Date Received : Oct 25, 2024
Date Reported : Nov 12, 2024
Report Number : 2969239-1

Page 1 of 4

Sample Number : 2443437-1
Sampled Date : Oct 25, 2024
Sample Description : Emission from Stationary Source
Location : ปล่อง HRSG 12
Parameter : NOx

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual O2		Corrected Value at 7% O2		Difference
		Start	Stop	CEMs (ppm)	RM (ppm)	CEMs (ppm)	RM (ppm)	
1*	25 Oct 24	10:50	11:10	14.22	13.26	31.68	28.00	-3.67
2	25 Oct 24	11:11	11:31	14.15	13.93	31.49	29.75	-1.74
3	25 Oct 24	11:32	11:52	14.07	13.91	31.29	29.60	-1.69
4	25 Oct 24	11:53	12:13	14.20	13.66	31.67	29.03	-2.64
5	25 Oct 24	12:14	12:34	19.66	20.20	46.20	44.49	-1.71
6	25 Oct 24	12:35	12:55	19.03	19.04	44.42	41.90	-2.53
7	25 Oct 24	12:56	13:16	19.05	19.41	44.70	42.68	-2.02
8*	25 Oct 24	13:17	13:37	15.59	15.00	35.22	31.93	-3.29
9	25 Oct 24	13:38	13:58	14.59	14.08	33.25	30.00	-3.24
10*	25 Oct 24	13:59	14:19	14.64	14.15	33.41	30.09	-3.32
11	25 Oct 24	14:20	14:40	14.40	14.22	32.85	30.22	-2.63
12	25 Oct 24	14:41	15:01	14.57	14.30	33.17	30.37	-2.80
Average						36.56	34.23	-2.33
Confidence Coefficient (CC)								0.43
Relative Accuracy (Compared with RM) (%)								8.08
Relative Accuracy Criteria ^{1/} (Compared with RM)								≤ 20%

Reference Method : US EPA Method 7E

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of NOx is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 2 (PS-2)

RA Result is within Criteria

Technical Management


Wichan Choonharat
Manager
ทะเบียนเลขที่ ว-204-ค-0006

Approved by


Sarayuth Jitranont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 2443437

Date Received : Oct 25, 2024
Date Reported : Nov 12, 2024
Report Number : 2969239-1

Page 2 of 4

Sample Number : 2443437-1
Sampled Date : Oct 25, 2024
Sample Description : Emission from Stationary Source
Location : ปล่อง HRSG 12
Parameter : SO₂

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual O ₂		Corrected Value at 7% O ₂		Difference
		Start	Stop	CEMs (ppm)	RM (ppm)	CEMs (ppm)	RM (ppm)	
1	25 Oct 24	10:50	11:10	0.23	0.03	0.52	0.06	-0.45
2	25 Oct 24	11:11	11:31	0.23	0.03	0.51	0.07	-0.45
3	25 Oct 24	11:32	11:52	0.23	0.03	0.51	0.07	-0.45
4	25 Oct 24	11:53	12:13	0.23	0.03	0.52	0.06	-0.45
5*	25 Oct 24	12:14	12:34	0.23	0.03	0.54	0.06	-0.48
6*	25 Oct 24	12:35	12:55	0.23	0.03	0.54	0.06	-0.48
7*	25 Oct 24	12:56	13:16	0.23	0.02	0.54	0.05	-0.49
8	25 Oct 24	13:17	13:37	0.23	0.03	0.52	0.06	-0.46
9	25 Oct 24	13:38	13:58	0.23	0.03	0.53	0.07	-0.46
10	25 Oct 24	13:59	14:19	0.23	0.03	0.53	0.06	-0.47
11	25 Oct 24	14:20	14:40	0.23	0.03	0.53	0.06	-0.46
12	25 Oct 24	14:41	15:01	0.23	0.04	0.53	0.08	-0.45
Average						0.52	0.07	-0.46
Confidence Coefficient (CC)								0.01
Relative Accuracy (Compared with Emission Standard : 6 ppm) (%)								7.70
Relative Accuracy Criteria ^{1/} (Compared with Emission Standard)								≤ 10%

Reference Method : US EPA Method 6C

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of SO₂ is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 2 (PS-2) compared with Emission Standard 6 ppm at 7%O₂
RA Result is within Criteria

Technical Management


Wichan Choonharat
Manager
ทะเบียนเลขที่ ว-204-ค-0006

Approved by


Sarayuth Jittranont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 2443437

Date Received : Oct 25, 2024
Date Reported : Nov 12, 2024
Report Number : 2969239-1

Page 3 of 4

Sample Number : 2443437-1
Sampled Date : Oct 25, 2024
Sample Description : Emission from Stationary Source
Location : ปล่อง HRSG 12
Parameter : CO

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual O2		Corrected Value at 7% O2		Difference
		Start	Stop	CEMs (ppm)	RM (ppm)	CEMs (ppm)	RM (ppm)	
1*	25 Oct 24	10:50	11:10	0.50	3.21	1.11	6.77	5.66
2	25 Oct 24	11:11	11:31	0.45	2.79	1.00	5.95	4.95
3*	25 Oct 24	11:32	11:52	0.19	2.61	0.42	5.55	5.12
4*	25 Oct 24	11:53	12:13	0.00	2.46	0.00	5.22	5.22
5	25 Oct 24	12:14	12:34	0.07	2.15	0.16	4.73	4.57
6	25 Oct 24	12:35	12:55	0.10	1.89	0.23	4.16	3.93
7	25 Oct 24	12:56	13:16	0.07	1.86	0.17	4.08	3.92
8	25 Oct 24	13:17	13:37	0.39	1.92	0.88	4.08	3.20
9	25 Oct 24	13:38	13:58	0.15	1.83	0.34	3.90	3.57
10	25 Oct 24	13:59	14:19	0.10	1.98	0.23	4.22	3.99
11	25 Oct 24	14:20	14:40	0.67	2.19	1.53	4.66	3.12
12	25 Oct 24	14:41	15:01	0.90	1.58	2.04	3.36	1.33
Average						0.73	4.35	3.62
Confidence Coefficient (CC)								1.04
Relative Accuracy (Compared with Emission Standard : 690 ppm) (%)								0.67
Relative Accuracy Criteria ^{1/} (Compared with Emission Standard)								≤ 5%

Reference Method : US EPA Method 10

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of CO is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 4 (PS-4) compared with Emission Standard 690 ppm at 7%O2
RA Result is within Criteria

Technical Management


Wichan Choonharat
Manager
ทะเบียนเลขที่ ว-204-ค-0006

Approved by


Sarayuth Jitranont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalo, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 2443437

Date Received : Oct 25, 2024

Date Reported : Nov 12, 2024

Report Number : 2969239-1

Page 4 of 4

Sample Number 2443437-1
Sampled Date Oct 25, 2024
Sample Description Emission from Stationary Source
Location ปล่อง HRSG 12
Parameter O2

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual		Difference
		Start	Stop	CEMs (%)	RM (%)	
1	25 Oct 24	10:50	11:10	14.66	14.32	-0.34
2	25 Oct 24	11:11	11:31	14.65	14.39	-0.26
3	25 Oct 24	11:32	11:52	14.65	14.37	-0.28
4	25 Oct 24	11:53	12:13	14.67	14.36	-0.31
5	25 Oct 24	12:14	12:34	14.98	14.59	-0.39
6	25 Oct 24	12:35	12:55	14.95	14.58	-0.36
7	25 Oct 24	12:56	13:16	14.98	14.58	-0.40
8	25 Oct 24	13:17	13:37	14.75	14.37	-0.38
9	25 Oct 24	13:38	13:58	14.80	14.38	-0.42
10*	25 Oct 24	13:59	14:19	14.81	14.36	-0.45
11*	25 Oct 24	14:20	14:40	14.81	14.36	-0.45
12*	25 Oct 24	14:41	15:01	14.79	14.35	-0.44
Average				14.79	14.44	-0.35
Confidence Coefficient (CC)						-
Relative Accuracy (Compared in Actual) (%)						0.35
Relative Accuracy Criteria (%)						≤ 1%

Reference Method : US EPA Method 3A

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of O2 is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 3 (PS-3)

RA Result is within Criteria

Sampled By : Sathapron Thakarw

Technical Management

Wichan Choonharat

Manager

ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jitranont

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 2443439

Date Received: Dec 19, 2024

Date Reported: Jan 02, 2025

Report Number: 3199531-1

Page 1 of 2

Sample Number 2443439-1
Sampled Date Dec 18-19, 2024
Sample Description Emission from Stationary Source
Location HRSG 11
Parameter Relative Response Audit

Relative Response Audit Test Report

No Sample	Date	Time		CEMS Values (mg/m ³ at 7%O ₂)	RM Values (mg/m ³ at 7%O ₂)	Allowable Range		Criterion
		Start	Stop			Minimum	Maximum	
1	18-Dec-24	14:05	14:41	0.00	0.35	-7.50	7.50	Pass
2	18-Dec-24	14:50	15:26	0.00	0.12	-7.50	7.50	Pass
3	19-Dec-24	10:00	10:36	0.00	0.20	-7.50	7.50	Pass
4	19-Dec-24	10:50	11:26	0.00	0.10	-7.50	7.50	Pass
5	19-Dec-24	11:40	12:16	0.00	0.10	-7.50	7.50	Pass

Remark: -Relative Response Audit is refer to 40 CFR Part 60 Appendix B : Performance Specification 11 : Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Source (PS-11)
- Correlation Equation of Linear curve $Y = 1.0982X - 0.1377$
-Emission limit 30 mg/m³ from Environmental Impact Assessment Report of Gulf JP NLL Co.,Ltd.

Technical Management

Wichan Choonharat
Manager

ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jittrantont
Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf NLL2 Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O : 4007005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 2443439

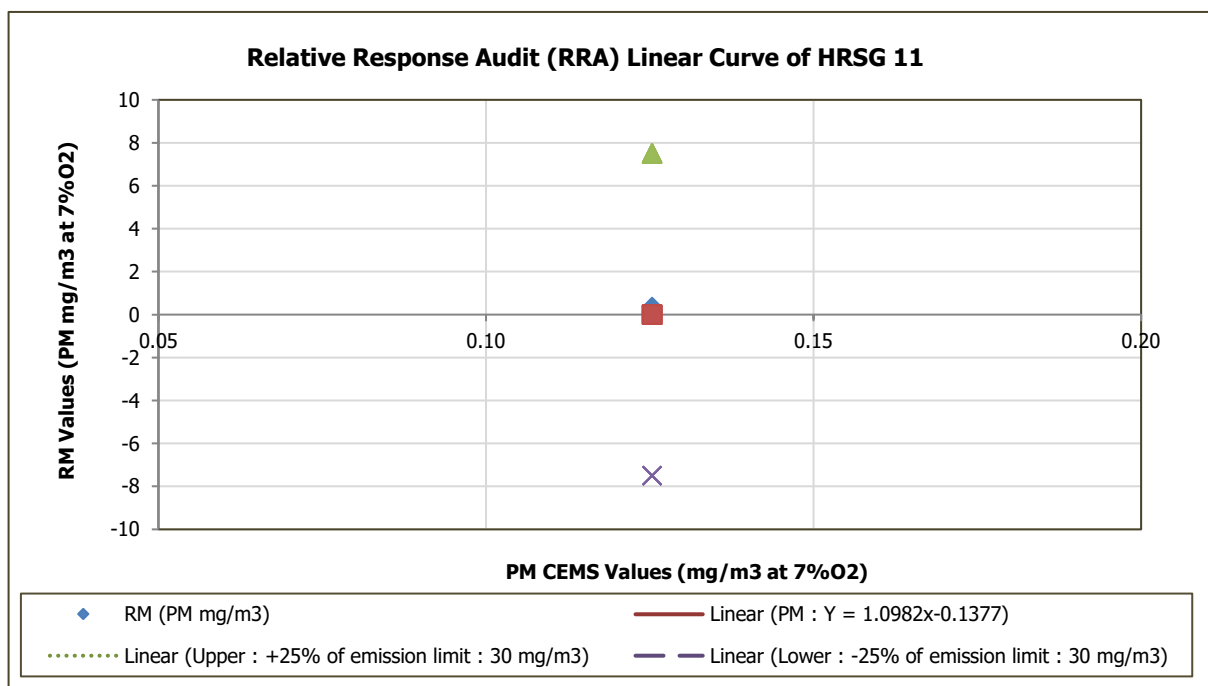
Date Received: Dec 19, 2024

Date Reported: Jan 02, 2024

Report Number: 3199531-1

Page 2 of 2

Sample Number 2443439-1
Sampled Date Dec 18-19, 2024
Sample Description Emission from Stationary Source
Location HRSG 11
Parameter Relative Response Audit



Sampled By : Warawut Pubpa

Technical Management

Wichan Choonharat

Wichan Choonharat

Manager

ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jittranont

Sarayuth Jittranont

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 2443440

Date Received: Oct 25, 2024

Date Reported: Nov 12, 2024

Report Number: 3152193-2

Page 1 of 2

Sample Number 2443440-1
Sampled Date Oct 25, 2024
Sample Description Emission from Stationary Source
Location ปล่อง HRSG 12
Parameter Relative Response Audit

Relative Response Audit Test Report

No Sample	Date	Time		CEMS Values (mg/m ³ at 7%O ₂)	RM Values (mg/m ³ at 7%O ₂)	Allowable Range		Criterion
		Start	Stop			Minimum	Maximum	
1	25-Oct-24	10:50	11:26	1.03	0.46	-6.47	8.53	Pass
2	25-Oct-24	11:35	12:11	1.03	0.23	-6.47	8.53	Pass
3	25-Oct-24	12:25	13:01	1.09	0.26	-6.41	8.59	Pass
4	25-Oct-24	13:15	13:51	1.05	0.23	-6.45	8.55	Pass
5	25-Oct-24	14:10	14:46	1.06	0.23	-6.44	8.56	Pass

Remark: - Relative Response Audit is refer to 40 CFR Part 60 Appendix B : Performance Specification 11 : Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Source (PS-11)
- Correlation Equation of Linear curve $Y = 2.6579X + 0.0547$
- Emission limit 30 mg/m³ from Environmental Impact Assessment Report of Gulf JP NLL Co., Ltd.

Technical Management

Wichan Choonharat
Manager

ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jitranont
Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0003

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

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 2443440

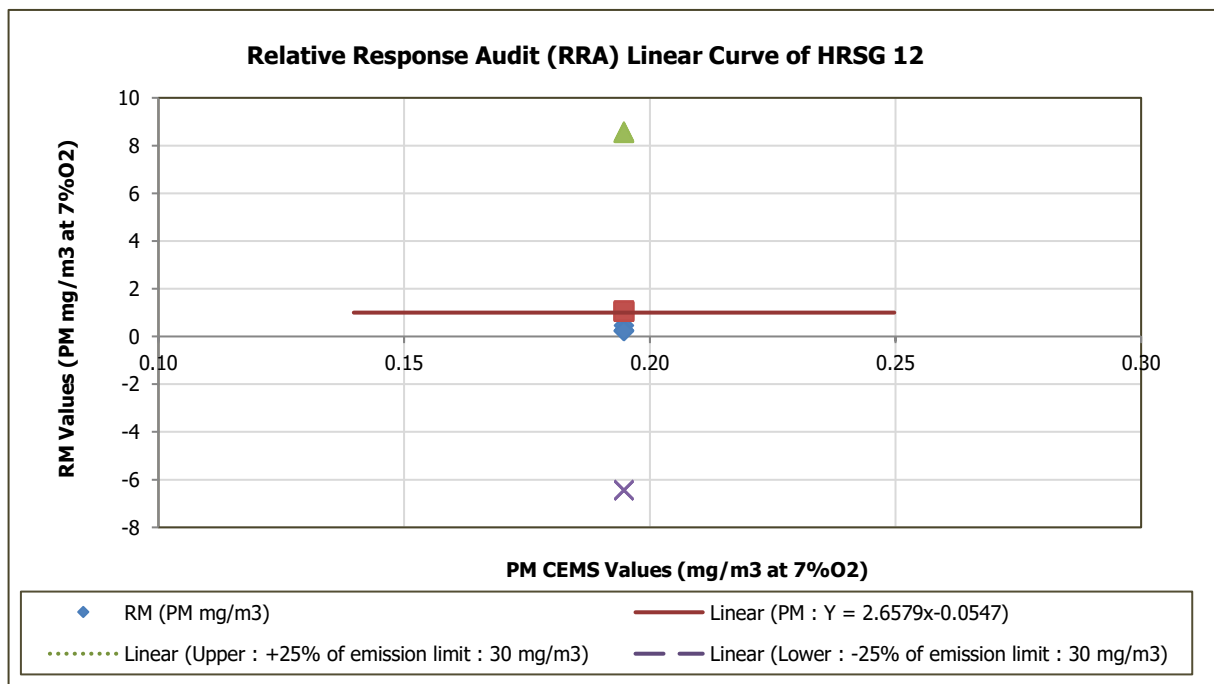
Date Received: Oct 25, 2024

Date Reported: Nov 12, 2024

Report Number: 3152193-2

Page 2 of 2

Sample Number 2443440-1
Sampled Date Oct 25, 2024
Sample Description Emission from Stationary Source
Location ปล่อง HRSG 12
Parameter Relative Response Audit



Sampled By : Thitipong Buadaeng

Technical Management

Wichan Choonharat

Wichan Choonharat
Manager

ทะเบียนเลขที่ ว-204-ค-0006

Approved by

Sarayuth Jittranont

Sarayuth Jittranont
Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0003

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

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ภาคผนวก ค-3

ผลการตรวจวัดระดับเสียงทั่วไป (Leq 24 hrs)



Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159927-1

Page 1 of 1

Sample Number 24118736-1
Parameter Noise (Leq 24 hrs.)
Location บริเวณสำนักงานเขตประกอบการฯ (GPS 47P 742993, 1419443)
Measurement Date Oct 24 - Oct 25, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900071

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	55.3	79.0	51.3
11:00 AM - 12:00 PM	55.1	73.9	51.2
12:00 PM - 01:00 PM	61.1	94.0	53.9
01:00 PM - 02:00 PM	57.4	75.0	54.0
02:00 PM - 03:00 PM	57.9	74.5	53.5
03:00 PM - 04:00 PM	58.6	75.5	54.0
04:00 PM - 05:00 PM	56.4	71.0	53.1
05:00 PM - 06:00 PM	56.2	70.4	52.9
06:00 PM - 07:00 PM	58.1	78.3	52.7
07:00 PM - 08:00 PM	53.5	68.6	50.6
08:00 PM - 09:00 PM	55.1	79.9	51.1
09:00 PM - 10:00 PM	51.3	65.2	49.6
10:00 PM - 11:00 PM	51.9	68.9	48.5
11:00 PM - 12:00 AM	50.5	65.1	47.5
12:00 AM - 01:00 AM	49.1	67.9	47.2
01:00 AM - 02:00 AM	49.4	76.0	46.3
02:00 AM - 03:00 AM	50.7	78.7	45.7
03:00 AM - 04:00 AM	48.3	65.0	46.2
04:00 AM - 05:00 AM	51.6	68.1	47.5
05:00 AM - 06:00 AM	56.2	77.6	49.3
06:00 AM - 07:00 AM	59.8	75.7	52.8
07:00 AM - 08:00 AM	55.0	75.2	48.7
08:00 AM - 09:00 AM	54.5	70.1	49.5
09:00 AM - 10:00 AM	54.5	70.3	49.6

Leq Average 24 hrs. (dB(A)) 55.8
Lmax (dB(A)) 94.0
L90 (dB(A)) 49.6
Ldn (dB(A)) 60.7
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159928-1

Page 1 of 1

Sample Number 24118736-2
Parameter Noise (Leq 24 hrs.)
Location บริเวณสำนักงานเขตประกอบการฯ (GPS 47P 742993, 1419443)
Measurement Date Oct 25 - Oct 26, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900071

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	54.1	75.4	49.9
11:00 AM - 12:00 PM	54.6	76.8	50.1
12:00 PM - 01:00 PM	55.5	71.1	51.6
01:00 PM - 02:00 PM	54.7	70.5	51.6
02:00 PM - 03:00 PM	56.6	75.1	52.7
03:00 PM - 04:00 PM	56.5	69.6	52.9
04:00 PM - 05:00 PM	56.2	71.9	52.6
05:00 PM - 06:00 PM	56.5	75.0	52.8
06:00 PM - 07:00 PM	59.0	73.1	56.3
07:00 PM - 08:00 PM	56.0	75.0	54.1
08:00 PM - 09:00 PM	55.0	73.3	52.2
09:00 PM - 10:00 PM	54.1	78.1	51.5
10:00 PM - 11:00 PM	55.4	72.4	52.3
11:00 PM - 12:00 AM	52.9	65.6	48.1
12:00 AM - 01:00 AM	52.2	65.4	47.9
01:00 AM - 02:00 AM	54.1	70.4	48.3
02:00 AM - 03:00 AM	53.9	79.3	47.2
03:00 AM - 04:00 AM	54.0	67.6	47.3
04:00 AM - 05:00 AM	52.2	69.3	48.0
05:00 AM - 06:00 AM	56.6	72.2	49.4
06:00 AM - 07:00 AM	59.9	76.8	53.1
07:00 AM - 08:00 AM	55.7	74.7	51.3
08:00 AM - 09:00 AM	56.2	72.6	52.4
09:00 AM - 10:00 AM	55.6	70.5	51.8

Leq Average 24 hrs. (dB(A)) 55.7
Lmax (dB(A)) 79.3
L90 (dB(A)) 51.6
Ldn (dB(A)) 61.8
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159929-1

Page 1 of 1

Sample Number 24118736-3
Parameter Noise (Leq 24 hrs.)
Location บริเวณสำนักงานเขตประกอบการฯ (GPS 47P 742993, 1419443)
Measurement Date Oct 26 - Oct 27, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900071

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	54.4	69.7	50.2
11:00 AM - 12:00 PM	54.6	73.2	50.4
12:00 PM - 01:00 PM	55.6	72.8	51.1
01:00 PM - 02:00 PM	56.0	71.3	51.5
02:00 PM - 03:00 PM	59.6	91.8	52.0
03:00 PM - 04:00 PM	57.8	76.2	53.2
04:00 PM - 05:00 PM	56.6	73.2	52.7
05:00 PM - 06:00 PM	56.8	68.7	54.1
06:00 PM - 07:00 PM	58.5	75.8	55.2
07:00 PM - 08:00 PM	57.1	68.8	55.1
08:00 PM - 09:00 PM	56.2	71.7	54.3
09:00 PM - 10:00 PM	55.7	67.4	54.0
10:00 PM - 11:00 PM	54.9	69.1	52.2
11:00 PM - 12:00 AM	53.6	71.0	51.9
12:00 AM - 01:00 AM	53.6	73.0	51.0
01:00 AM - 02:00 AM	53.2	68.4	50.3
02:00 AM - 03:00 AM	51.7	65.9	49.5
03:00 AM - 04:00 AM	51.3	69.8	49.6
04:00 AM - 05:00 AM	52.9	67.1	50.1
05:00 AM - 06:00 AM	57.0	72.7	51.0
06:00 AM - 07:00 AM	58.8	73.3	53.9
07:00 AM - 08:00 AM	56.2	72.9	51.6
08:00 AM - 09:00 AM	55.8	73.0	51.9
09:00 AM - 10:00 AM	56.0	74.0	51.5

Leq Average 24 hrs. (dB(A))

56.1

Lmax (dB(A))

91.8

L90 (dB(A))

51.6

Ldn (dB(A))

61.5

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159930-1

Page 1 of 1

Sample Number 24118736-4
Parameter Noise (Leq 24 hrs.)
Location บริเวณสำนักงานเขตประกอบการฯ (GPS 47P 742993, 1419443)
Measurement Date Oct 27 - Oct 28, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900071

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	54.8	73.1	51.4
11:00 AM - 12:00 PM	56.5	71.3	52.5
12:00 PM - 01:00 PM	56.5	72.9	52.7
01:00 PM - 02:00 PM	56.6	70.6	52.7
02:00 PM - 03:00 PM	56.5	73.6	53.1
03:00 PM - 04:00 PM	57.4	72.2	53.6
04:00 PM - 05:00 PM	56.7	79.1	53.1
05:00 PM - 06:00 PM	57.4	70.5	54.0
06:00 PM - 07:00 PM	57.7	74.1	54.8
07:00 PM - 08:00 PM	56.8	76.0	55.1
08:00 PM - 09:00 PM	55.9	67.1	54.1
09:00 PM - 10:00 PM	54.9	65.4	53.6
10:00 PM - 11:00 PM	54.7	67.1	52.6
11:00 PM - 12:00 AM	52.9	65.7	51.5
12:00 AM - 01:00 AM	52.2	66.6	50.4
01:00 AM - 02:00 AM	50.7	68.7	49.3
02:00 AM - 03:00 AM	49.7	68.8	47.8
03:00 AM - 04:00 AM	51.8	70.3	47.8
04:00 AM - 05:00 AM	52.3	77.7	48.2
05:00 AM - 06:00 AM	57.3	76.5	50.3
06:00 AM - 07:00 AM	58.6	75.0	51.6
07:00 AM - 08:00 AM	55.7	80.1	50.2
08:00 AM - 09:00 AM	55.9	72.0	50.8
09:00 AM - 10:00 AM	54.4	68.1	49.6

Leq Average 24 hrs. (dB(A)) 55.7
Lmax (dB(A)) 80.1
L90 (dB(A)) 51.6
Ldn (dB(A)) 61.1
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159931-1

Page 1 of 1

Sample Number 24118736-5
Parameter Noise (Leq 24 hrs.)
Location บริเวณสำนักงานเขตประกอบการฯ (GPS 47P 742993, 1419443)
Measurement Date Oct 28 - Oct 29, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900071

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	54.0	75.0	48.8
11:00 AM - 12:00 PM	55.4	73.6	49.8
12:00 PM - 01:00 PM	53.8	73.9	49.8
01:00 PM - 02:00 PM	57.0	72.1	50.3
02:00 PM - 03:00 PM	57.1	74.7	52.0
03:00 PM - 04:00 PM	56.6	70.5	51.5
04:00 PM - 05:00 PM	53.4	67.7	50.2
05:00 PM - 06:00 PM	54.9	78.8	51.3
06:00 PM - 07:00 PM	56.6	69.9	53.6
07:00 PM - 08:00 PM	54.4	69.4	52.6
08:00 PM - 09:00 PM	53.6	75.0	51.6
09:00 PM - 10:00 PM	51.9	65.5	50.3
10:00 PM - 11:00 PM	53.0	67.9	51.1
11:00 PM - 12:00 AM	51.8	68.5	49.9
12:00 AM - 01:00 AM	50.5	70.5	48.9
01:00 AM - 02:00 AM	49.7	70.0	47.4
02:00 AM - 03:00 AM	48.5	69.9	46.7
03:00 AM - 04:00 AM	52.0	74.1	47.0
04:00 AM - 05:00 AM	50.0	70.4	47.4
05:00 AM - 06:00 AM	55.8	76.3	48.6
06:00 AM - 07:00 AM	56.6	74.5	50.6
07:00 AM - 08:00 AM	54.0	71.6	48.7
08:00 AM - 09:00 AM	54.4	81.4	48.6
09:00 AM - 10:00 AM	52.3	73.9	47.4

Leq Average 24 hrs. (dB(A))

54.2

Lmax (dB(A))

81.4

L90 (dB(A))

49.8

Ldn (dB(A))

59.6

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports\Air Noise.rpt (10:46AM)



Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 24118736
Date Received : Nov 04, 2024
Date Reported : Nov 08, 2024
Report Number: 3159932-1

Page 1 of 1

Sample Number 24118736-6
Parameter Noise (Leq 24 hrs.)
Location ชุมชนบ้านสามแยก (GPS 47P 742231, 1417890)
Measurement Date Oct 24 - Oct 25, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 709746

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	58.9	83.8	47.9
11:00 AM - 12:00 PM	63.4	82.5	45.0
12:00 PM - 01:00 PM	61.7	79.1	53.0
01:00 PM - 02:00 PM	63.9	81.3	55.2
02:00 PM - 03:00 PM	64.0	82.4	52.0
03:00 PM - 04:00 PM	62.7	83.2	54.7
04:00 PM - 05:00 PM	61.4	83.2	52.1
05:00 PM - 06:00 PM	61.4	86.7	51.2
06:00 PM - 07:00 PM	63.0	91.4	50.4
07:00 PM - 08:00 PM	57.5	81.9	47.1
08:00 PM - 09:00 PM	59.0	87.5	47.7
09:00 PM - 10:00 PM	56.3	87.4	47.2
10:00 PM - 11:00 PM	54.8	73.7	45.7
11:00 PM - 12:00 AM	52.1	75.4	45.4
12:00 AM - 01:00 AM	52.2	76.9	45.2
01:00 AM - 02:00 AM	60.6	75.2	46.0
02:00 AM - 03:00 AM	55.4	70.8	46.5
03:00 AM - 04:00 AM	53.3	83.6	45.2
04:00 AM - 05:00 AM	56.2	74.6	46.4
05:00 AM - 06:00 AM	61.4	81.5	53.4
06:00 AM - 07:00 AM	62.6	84.3	51.2
07:00 AM - 08:00 AM	59.9	85.6	48.5
08:00 AM - 09:00 AM	58.4	79.8	47.0
09:00 AM - 10:00 AM	58.3	82.5	46.8

Leq Average 24 hrs. (dB(A)) 60.4
Lmax (dB(A)) 91.4
L90 (dB(A)) 47.2
Ldn (dB(A)) 65.2
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159933-1

Page 1 of 1

Sample Number 24118736-7
Parameter Noise (Leq 24 hrs.)
Location ชุมชนบ้านสามแยก (GPS 47P 742231, 1417890)
Measurement Date Oct 25 - Oct 26, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 709746

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	58.1	81.4	53.4
11:00 AM - 12:00 PM	58.8	76.5	53.5
12:00 PM - 01:00 PM	57.2	76.5	52.8
01:00 PM - 02:00 PM	58.2	75.3	52.9
02:00 PM - 03:00 PM	59.1	74.6	52.3
03:00 PM - 04:00 PM	58.8	81.5	51.9
04:00 PM - 05:00 PM	58.4	78.9	54.0
05:00 PM - 06:00 PM	59.5	74.6	57.2
06:00 PM - 07:00 PM	61.8	80.6	59.4
07:00 PM - 08:00 PM	59.8	73.0	58.8
08:00 PM - 09:00 PM	58.8	73.0	57.8
09:00 PM - 10:00 PM	58.9	72.5	57.9
10:00 PM - 11:00 PM	58.6	72.3	56.3
11:00 PM - 12:00 AM	57.3	80.3	56.1
12:00 AM - 01:00 AM	56.9	70.4	55.8
01:00 AM - 02:00 AM	59.7	84.5	56.2
02:00 AM - 03:00 AM	59.0	80.1	57.1
03:00 AM - 04:00 AM	57.2	69.1	56.2
04:00 AM - 05:00 AM	60.2	87.9	56.5
05:00 AM - 06:00 AM	63.2	79.6	58.4
06:00 AM - 07:00 AM	64.3	80.5	60.0
07:00 AM - 08:00 AM	62.7	78.3	58.7
08:00 AM - 09:00 AM	62.2	77.0	58.4
09:00 AM - 10:00 AM	62.3	79.7	57.6

Leq Average 24 hrs. (dB(A)) 60.1
Lmax (dB(A)) 87.9
L90 (dB(A)) 56.3
Ldn (dB(A)) 66.7
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159934-1

Page 1 of 1

Sample Number	24118736-8
Parameter	Noise (Leq 24 hrs.)
Location	ชุมชนบ้านสามแยก (GPS 47P 742231, 1417890)
Measurement Date	Oct 26 - Oct 27, 2024
Measurement by	Chatchai Sukpia
Sound Level meter	Serial No. 709746

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	61.0	82.8	56.3
11:00 AM - 12:00 PM	62.4	78.1	57.1
12:00 PM - 01:00 PM	61.7	77.1	57.6
01:00 PM - 02:00 PM	62.6	81.8	58.2
02:00 PM - 03:00 PM	63.6	81.7	58.6
03:00 PM - 04:00 PM	63.3	82.1	59.1
04:00 PM - 05:00 PM	63.3	84.4	59.0
05:00 PM - 06:00 PM	61.8	77.9	59.2
06:00 PM - 07:00 PM	62.9	80.5	59.6
07:00 PM - 08:00 PM	60.2	76.6	58.4
08:00 PM - 09:00 PM	60.5	77.3	58.0
09:00 PM - 10:00 PM	60.1	83.5	57.4
10:00 PM - 11:00 PM	60.0	74.3	57.3
11:00 PM - 12:00 AM	58.8	76.2	56.7
12:00 AM - 01:00 AM	58.2	75.8	56.9
01:00 AM - 02:00 AM	58.1	75.5	56.9
02:00 AM - 03:00 AM	57.5	78.2	56.1
03:00 AM - 04:00 AM	58.5	79.9	55.6
04:00 AM - 05:00 AM	59.1	79.7	55.8
05:00 AM - 06:00 AM	63.3	80.7	58.1
06:00 AM - 07:00 AM	64.2	84.8	55.9
07:00 AM - 08:00 AM	62.8	79.3	57.4
08:00 AM - 09:00 AM	63.0	80.8	58.1
09:00 AM - 10:00 AM	61.8	77.9	59.2

Leq Average 24 hrs. (dB(A))	61.6		
Lmax (dB(A))		84.8	
L90 (dB(A))			57.4
Ldn (dB(A))	67.1		
Standard (dB(A))	70	115	

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

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Supot Salamteh
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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159935-1

Page 1 of 1

Sample Number 24118736-9
Parameter Noise (Leq 24 hrs.)
Location ชุมชนบ้านสามแยก (GPS 47P 742231, 1417890)
Measurement Date Oct 27 - Oct 28, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 709746

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	62.1	87.1	50.0
11:00 AM - 12:00 PM	62.5	87.9	52.8
12:00 PM - 01:00 PM	62.0	86.6	52.0
01:00 PM - 02:00 PM	62.6	84.8	52.0
02:00 PM - 03:00 PM	62.1	86.0	51.8
03:00 PM - 04:00 PM	63.9	85.1	54.7
04:00 PM - 05:00 PM	64.2	84.8	55.9
05:00 PM - 06:00 PM	63.6	89.2	51.9
06:00 PM - 07:00 PM	62.7	87.4	52.5
07:00 PM - 08:00 PM	62.1	86.0	50.5
08:00 PM - 09:00 PM	58.4	79.5	49.1
09:00 PM - 10:00 PM	61.4	89.5	48.9
10:00 PM - 11:00 PM	57.2	81.5	48.7
11:00 PM - 12:00 AM	58.5	87.9	47.2
12:00 AM - 01:00 AM	55.8	80.3	46.4
01:00 AM - 02:00 AM	54.4	76.4	45.0
02:00 AM - 03:00 AM	51.2	73.8	44.7
03:00 AM - 04:00 AM	51.5	73.2	44.9
04:00 AM - 05:00 AM	55.5	77.1	45.4
05:00 AM - 06:00 AM	60.2	83.7	48.0
06:00 AM - 07:00 AM	64.0	91.2	55.1
07:00 AM - 08:00 AM	63.7	83.3	53.1
08:00 AM - 09:00 AM	61.7	80.1	50.5
09:00 AM - 10:00 AM	62.3	86.5	51.2

Leq Average 24 hrs. (dB(A))

61.4

Lmax (dB(A))

91.2

L90 (dB(A))

50.5

Ldn (dB(A))

65.6

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

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Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159936-1

Page 1 of 1

Sample Number : 24118736-10
Parameter : Noise (Leq 24 hrs.)
Location : ชุมชนบ้านสามแยก (GPS 47P 742231, 1417890)
Measurement Date : Oct 28 - Oct 29, 2024
Measurement by : Chatchai Sukpia
Sound Level meter : Serial No. 709746

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	61.4	82.2	50.0
11:00 AM - 12:00 PM	63.6	92.1	50.4
12:00 PM - 01:00 PM	61.4	83.9	50.9
01:00 PM - 02:00 PM	60.2	78.5	50.7
02:00 PM - 03:00 PM	61.1	81.1	50.2
03:00 PM - 04:00 PM	62.3	80.6	52.1
04:00 PM - 05:00 PM	64.8	88.9	51.7
05:00 PM - 06:00 PM	61.6	91.5	50.0
06:00 PM - 07:00 PM	61.9	82.9	52.2
07:00 PM - 08:00 PM	62.7	91.4	50.7
08:00 PM - 09:00 PM	57.8	81.4	48.8
09:00 PM - 10:00 PM	57.2	84.3	48.0
10:00 PM - 11:00 PM	56.2	82.0	47.7
11:00 PM - 12:00 AM	57.8	83.6	47.7
12:00 AM - 01:00 AM	53.3	76.7	46.4
01:00 AM - 02:00 AM	52.7	75.5	44.9
02:00 AM - 03:00 AM	50.9	76.0	45.0
03:00 AM - 04:00 AM	51.6	79.7	44.3
04:00 AM - 05:00 AM	56.9	79.6	45.6
05:00 AM - 06:00 AM	59.3	85.6	46.6
06:00 AM - 07:00 AM	61.4	83.4	50.6
07:00 AM - 08:00 AM	62.4	84.3	51.6
08:00 AM - 09:00 AM	60.6	81.9	50.0
09:00 AM - 10:00 AM	61.7	86.4	50.5

Leq Average 24 hrs. (dB(A)) : 60.5
Lmax (dB(A)) : 92.1
L90 (dB(A)) : 50.0
Ldn (dB(A)) : 64.4
Standard (dB(A)) : 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

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Scientist (3)

Approved by

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Supot Salamteh
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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159937-1

Page 1 of 1

Sample Number 24118736-11
Parameter Noise (Leq 24 hrs.)
Location ชุมชนนิคมสร้างตนเอง (GPS 47P 742998, 1422552)
Measurement Date Oct 24 - Oct 25, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900072

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	45.2	74.3	37.3
11:00 AM - 12:00 PM	48.9	75.2	36.5
12:00 PM - 01:00 PM	45.2	67.7	36.2
01:00 PM - 02:00 PM	43.5	64.3	35.8
02:00 PM - 03:00 PM	41.9	62.3	36.0
03:00 PM - 04:00 PM	41.9	63.7	34.8
04:00 PM - 05:00 PM	44.3	64.8	37.1
05:00 PM - 06:00 PM	46.8	69.1	40.1
06:00 PM - 07:00 PM	45.9	70.7	40.6
07:00 PM - 08:00 PM	46.2	66.2	42.8
08:00 PM - 09:00 PM	47.1	68.8	43.8
09:00 PM - 10:00 PM	46.6	66.7	43.3
10:00 PM - 11:00 PM	46.9	73.2	42.1
11:00 PM - 12:00 AM	43.8	64.3	40.8
12:00 AM - 01:00 AM	47.3	70.6	40.5
01:00 AM - 02:00 AM	45.1	73.1	39.8
02:00 AM - 03:00 AM	43.9	70.4	39.5
03:00 AM - 04:00 AM	42.5	67.9	37.8
04:00 AM - 05:00 AM	39.8	52.5	37.8
05:00 AM - 06:00 AM	41.0	70.9	36.4
06:00 AM - 07:00 AM	45.8	78.6	37.8
07:00 AM - 08:00 AM	48.4	71.0	40.4
08:00 AM - 09:00 AM	46.9	77.2	39.6
09:00 AM - 10:00 AM	45.0	70.2	37.6

Leq Average 24 hrs. (dB(A)) 45.5
Lmax (dB(A)) 78.6
L90 (dB(A)) 37.8
Ldn (dB(A)) 51.3
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalo, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159938-1

Page 1 of 1

Sample Number 24118736-12
Parameter Noise (Leq 24 hrs.)
Location ชุมชนนิคมสร้างตนเอง (GPS 47P 742998, 1422552)
Measurement Date Oct 25 - Oct 26, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900072

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	45.5	68.0	38.2
11:00 AM - 12:00 PM	42.4	62.2	37.2
12:00 PM - 01:00 PM	45.4	75.5	36.7
01:00 PM - 02:00 PM	42.3	63.9	36.4
02:00 PM - 03:00 PM	43.7	66.3	37.4
03:00 PM - 04:00 PM	45.4	68.2	37.4
04:00 PM - 05:00 PM	44.9	72.1	37.6
05:00 PM - 06:00 PM	46.5	77.1	38.1
06:00 PM - 07:00 PM	44.1	63.1	40.4
07:00 PM - 08:00 PM	46.4	69.9	42.5
08:00 PM - 09:00 PM	46.4	67.3	43.4
09:00 PM - 10:00 PM	49.7	76.2	42.6
10:00 PM - 11:00 PM	44.8	62.2	42.7
11:00 PM - 12:00 AM	44.9	70.5	42.8
12:00 AM - 01:00 AM	48.0	81.8	41.9
01:00 AM - 02:00 AM	43.0	65.5	40.9
02:00 AM - 03:00 AM	42.3	56.6	40.4
03:00 AM - 04:00 AM	42.9	64.1	39.2
04:00 AM - 05:00 AM	40.1	51.8	38.3
05:00 AM - 06:00 AM	42.0	70.2	38.6
06:00 AM - 07:00 AM	44.9	79.9	38.8
07:00 AM - 08:00 AM	48.2	67.1	41.4
08:00 AM - 09:00 AM	46.2	67.6	41.0
09:00 AM - 10:00 AM	44.0	65.5	38.7

Leq Average 24 hrs. (dB(A))

45.3

Lmax (dB(A))

81.8

L90 (dB(A))

38.8

Ldn (dB(A))

50.9

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159939-1

Page 1 of 1

Sample Number 24118736-13
Parameter Noise (Leq 24 hrs.)
Location ชุมชนนิคมสร้างตนเอง (GPS 47P 742998, 1422552)
Measurement Date Oct 26 - Oct 27, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900072

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	46.6	71.6	40.6
11:00 AM - 12:00 PM	47.1	47.8	46.9
12:00 PM - 01:00 PM	47.4	48.2	47.2
01:00 PM - 02:00 PM	47.2	47.9	47.0
02:00 PM - 03:00 PM	47.2	47.7	47.0
03:00 PM - 04:00 PM	47.3	48.2	47.1
04:00 PM - 05:00 PM	47.4	48.7	47.2
05:00 PM - 06:00 PM	47.7	49.0	47.4
06:00 PM - 07:00 PM	48.0	49.0	47.6
07:00 PM - 08:00 PM	47.8	49.5	47.3
08:00 PM - 09:00 PM	47.6	49.3	46.9
09:00 PM - 10:00 PM	47.1	48.2	46.7
10:00 PM - 11:00 PM	47.2	48.3	46.7
11:00 PM - 12:00 AM	47.4	48.8	46.7
12:00 AM - 01:00 AM	47.8	49.0	47.1
01:00 AM - 02:00 AM	47.9	49.0	47.3
02:00 AM - 03:00 AM	48.5	49.4	47.8
03:00 AM - 04:00 AM	47.7	48.8	47.2
04:00 AM - 05:00 AM	47.2	48.7	46.6
05:00 AM - 06:00 AM	47.2	49.3	46.7
06:00 AM - 07:00 AM	46.8	47.8	46.5
07:00 AM - 08:00 AM	46.9	47.7	46.6
08:00 AM - 09:00 AM	46.6	47.7	46.2
09:00 AM - 10:00 AM	46.9	47.9	46.3

Leq Average 24 hrs. (dB(A))

47.4

Lmax (dB(A))

71.6

L90 (dB(A))

46.9

Ldn (dB(A))

53.9

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Suppt S.

Supot Salamteh
Section Head

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11727-21/ EMAIL

S:\Reports_Air Noise.rpt (10:49AM)



Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159940-1

Page 1 of 1

Sample Number 24118736-14
Parameter Noise (Leq 24 hrs.)
Location ชุมชนนิคมสร้างตนเอง (GPS 47P 742998, 1422552)
Measurement Date Oct 27 - Oct 28, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900072

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	47.8	49.2	47.3
11:00 AM - 12:00 PM	48.2	49.4	47.8
12:00 PM - 01:00 PM	48.6	49.8	48.2
01:00 PM - 02:00 PM	48.6	49.7	48.1
02:00 PM - 03:00 PM	48.5	49.7	48.1
03:00 PM - 04:00 PM	48.6	49.5	48.3
04:00 PM - 05:00 PM	48.8	49.8	48.4
05:00 PM - 06:00 PM	48.9	49.8	48.6
06:00 PM - 07:00 PM	48.9	49.9	48.6
07:00 PM - 08:00 PM	48.2	49.9	44.7
08:00 PM - 09:00 PM	43.2	47.4	42.0
09:00 PM - 10:00 PM	42.1	43.0	41.9
10:00 PM - 11:00 PM	42.3	43.5	42.1
11:00 PM - 12:00 AM	42.0	44.9	41.8
12:00 AM - 01:00 AM	42.3	44.3	42.0
01:00 AM - 02:00 AM	44.0	47.6	42.1
02:00 AM - 03:00 AM	41.9	43.2	41.7
03:00 AM - 04:00 AM	42.9	45.5	42.0
04:00 AM - 05:00 AM	44.1	49.6	41.8
05:00 AM - 06:00 AM	48.5	50.9	47.8
06:00 AM - 07:00 AM	47.7	48.9	47.3
07:00 AM - 08:00 AM	47.1	48.5	46.8
08:00 AM - 09:00 AM	46.7	47.7	46.4
09:00 AM - 10:00 AM	46.9	48.3	46.4

Leq Average 24 hrs. (dB(A)) 46.8
Lmax (dB(A)) 50.9
L90 (dB(A)) 46.4
Ldn (dB(A)) 51.7
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159941-1

Page 1 of 1

Sample Number 24118736-15
Parameter Noise (Leq 24 hrs.)
Location หมู่ชนนิคมสร้างตนเอง (GPS 47P 742998, 1422552)
Measurement Date Oct 28 - Oct 29, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 900072

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	47.1	48.1	46.9
11:00 AM - 12:00 PM	47.2	48.1	46.9
12:00 PM - 01:00 PM	47.3	48.3	47.1
01:00 PM - 02:00 PM	47.3	48.2	47.1
02:00 PM - 03:00 PM	47.5	48.5	47.3
03:00 PM - 04:00 PM	47.9	49.2	47.5
04:00 PM - 05:00 PM	48.1	49.3	47.6
05:00 PM - 06:00 PM	48.2	49.4	47.8
06:00 PM - 07:00 PM	48.3	49.2	47.9
07:00 PM - 08:00 PM	48.3	49.9	48.0
08:00 PM - 09:00 PM	47.6	49.5	46.9
09:00 PM - 10:00 PM	47.7	48.5	47.3
10:00 PM - 11:00 PM	47.5	48.7	47.0
11:00 PM - 12:00 AM	47.6	48.6	47.2
12:00 AM - 01:00 AM	47.9	49.1	47.4
01:00 AM - 02:00 AM	47.9	49.2	47.3
02:00 AM - 03:00 AM	48.2	49.8	47.5
03:00 AM - 04:00 AM	48.0	49.3	47.7
04:00 AM - 05:00 AM	47.6	49.2	46.9
05:00 AM - 06:00 AM	47.4	49.6	46.8
06:00 AM - 07:00 AM	46.8	47.8	46.6
07:00 AM - 08:00 AM	46.6	47.5	46.4
08:00 AM - 09:00 AM	46.5	47.7	46.1
09:00 AM - 10:00 AM	46.5	47.7	46.1

Leq Average 24 hrs. (dB(A)) 47.6
Lmax (dB(A)) 49.9
L90 (dB(A)) 47.1
Ldn (dB(A)) 54.1
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159942-1

Page 1 of 1

Sample Number 24118736-16
Parameter Noise (Leq 24 hrs.)
Location ชุมชนบ้านสวนหลวง (GPS 47P 744360, 1420358)
Measurement Date Oct 24 - Oct 25, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 597169

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	67.3	88.1	59.7
11:00 AM - 12:00 PM	65.9	87.7	59.9
12:00 PM - 01:00 PM	64.8	83.6	59.2
01:00 PM - 02:00 PM	66.2	89.8	60.5
02:00 PM - 03:00 PM	66.6	87.8	62.2
03:00 PM - 04:00 PM	68.5	89.4	62.9
04:00 PM - 05:00 PM	68.7	90.5	62.4
05:00 PM - 06:00 PM	68.0	89.0	61.4
06:00 PM - 07:00 PM	67.1	88.8	61.7
07:00 PM - 08:00 PM	69.0	89.2	62.6
08:00 PM - 09:00 PM	68.1	89.0	63.1
09:00 PM - 10:00 PM	66.2	76.1	62.5
10:00 PM - 11:00 PM	66.0	84.7	61.3
11:00 PM - 12:00 AM	63.7	86.8	59.2
12:00 AM - 01:00 AM	60.9	80.9	58.3
01:00 AM - 02:00 AM	60.8	76.0	58.6
02:00 AM - 03:00 AM	60.5	79.3	58.3
03:00 AM - 04:00 AM	60.4	85.7	57.5
04:00 AM - 05:00 AM	60.1	77.5	57.5
05:00 AM - 06:00 AM	62.5	84.7	57.6
06:00 AM - 07:00 AM	66.0	83.7	59.3
07:00 AM - 08:00 AM	64.5	82.5	57.7
08:00 AM - 09:00 AM	62.5	86.0	53.1
09:00 AM - 10:00 AM	64.8	88.3	51.4

Leq Average 24 hrs. (dB(A)) 65.8
Lmax (dB(A)) 90.5
L90 (dB(A)) 59.3
Ldn (dB(A)) 70.2
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159943-1

Page 1 of 1

Sample Number : 24118736-17
Parameter : Noise (Leq 24 hrs.)
Location : ชุมชนบ้านสวนหลวง (GPS 47P 744360, 1420358)
Measurement Date : Oct 25 - Oct 26, 2024
Measurement by : Chatchai Sukpia
Sound Level meter : Serial No. 597169

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	63.4	84.0	50.9
11:00 AM - 12:00 PM	62.5	83.1	51.0
12:00 PM - 01:00 PM	67.0	85.5	59.1
01:00 PM - 02:00 PM	66.3	84.3	58.6
02:00 PM - 03:00 PM	66.2	87.5	59.4
03:00 PM - 04:00 PM	65.6	85.1	60.5
04:00 PM - 05:00 PM	67.2	89.1	61.7
05:00 PM - 06:00 PM	66.8	91.8	60.6
06:00 PM - 07:00 PM	66.5	87.1	61.1
07:00 PM - 08:00 PM	68.6	87.8	64.2
08:00 PM - 09:00 PM	67.7	85.9	62.0
09:00 PM - 10:00 PM	66.4	85.1	62.6
10:00 PM - 11:00 PM	64.2	82.0	61.7
11:00 PM - 12:00 AM	62.4	78.8	60.0
12:00 AM - 01:00 AM	63.1	85.0	60.6
01:00 AM - 02:00 AM	61.9	76.5	59.8
02:00 AM - 03:00 AM	61.2	74.3	59.3
03:00 AM - 04:00 AM	62.2	87.6	58.7
04:00 AM - 05:00 AM	61.7	82.5	58.9
05:00 AM - 06:00 AM	62.1	80.2	58.8
06:00 AM - 07:00 AM	65.8	83.3	59.9
07:00 AM - 08:00 AM	67.4	84.0	61.0
08:00 AM - 09:00 AM	67.5	87.1	61.5
09:00 AM - 10:00 AM	65.3	84.5	59.4

Leq Average 24 hrs. (dB(A)) : 65.5
Lmax (dB(A)) : 91.8
L90 (dB(A)) : 59.9
Ldn (dB(A)) : 70.1
Standard (dB(A)) : 70

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159944-1

Page 1 of 1

Sample Number 24118736-18
Parameter Noise (Leq 24 hrs.)
Location ชุมชนบ้านสวนหลวง (GPS 47P 744360, 1420358)
Measurement Date Oct 26 - Oct 27, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 597169

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	66.2	86.7	59.7
11:00 AM - 12:00 PM	66.3	88.0	59.3
12:00 PM - 01:00 PM	66.1	85.3	59.7
01:00 PM - 02:00 PM	65.7	86.1	59.5
02:00 PM - 03:00 PM	66.2	86.3	59.3
03:00 PM - 04:00 PM	67.1	87.3	60.5
04:00 PM - 05:00 PM	67.6	86.5	60.9
05:00 PM - 06:00 PM	67.3	86.1	59.3
06:00 PM - 07:00 PM	66.9	87.0	61.4
07:00 PM - 08:00 PM	68.3	89.8	62.3
08:00 PM - 09:00 PM	66.9	85.2	63.2
09:00 PM - 10:00 PM	66.5	83.5	63.7
10:00 PM - 11:00 PM	65.3	81.6	63.1
11:00 PM - 12:00 AM	64.8	74.0	63.1
12:00 AM - 01:00 AM	66.4	91.2	63.0
01:00 AM - 02:00 AM	64.6	75.6	62.6
02:00 AM - 03:00 AM	64.8	78.4	63.0
03:00 AM - 04:00 AM	63.5	76.3	61.8
04:00 AM - 05:00 AM	62.5	77.9	60.0
05:00 AM - 06:00 AM	64.0	86.9	59.8
06:00 AM - 07:00 AM	64.7	84.8	60.4
07:00 AM - 08:00 AM	67.3	87.4	60.1
08:00 AM - 09:00 AM	66.2	87.5	58.9
09:00 AM - 10:00 AM	68.4	89.6	60.4

Leq Average 24 hrs. (dB(A))

66.2

Lmax (dB(A))

91.2

L90 (dB(A))

60.4

Ldn (dB(A))

71.5

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159945-1

Page 1 of 1

Sample Number 24118736-19
Parameter Noise (Leq 24 hrs.)
Location ชุมชนบ้านสวนหลวง (GPS 47P 744360, 1420358)
Measurement Date Oct 27 - Oct 28, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 597169

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	66.7	86.8	58.0
11:00 AM - 12:00 PM	68.5	88.6	60.5
12:00 PM - 01:00 PM	68.2	89.3	59.9
01:00 PM - 02:00 PM	67.3	88.3	58.1
02:00 PM - 03:00 PM	68.4	90.0	60.3
03:00 PM - 04:00 PM	68.8	92.2	61.3
04:00 PM - 05:00 PM	67.6	90.7	61.1
05:00 PM - 06:00 PM	68.3	86.0	61.4
06:00 PM - 07:00 PM	66.5	84.3	61.4
07:00 PM - 08:00 PM	67.8	84.3	63.2
08:00 PM - 09:00 PM	68.4	87.5	63.8
09:00 PM - 10:00 PM	66.6	86.2	63.9
10:00 PM - 11:00 PM	66.2	87.9	63.7
11:00 PM - 12:00 AM	65.4	76.9	63.6
12:00 AM - 01:00 AM	66.2	87.5	63.2
01:00 AM - 02:00 AM	64.3	74.7	62.5
02:00 AM - 03:00 AM	63.6	78.4	61.3
03:00 AM - 04:00 AM	62.0	81.2	59.4
04:00 AM - 05:00 AM	63.0	77.1	61.2
05:00 AM - 06:00 AM	64.9	86.0	61.4
06:00 AM - 07:00 AM	65.7	85.0	62.0
07:00 AM - 08:00 AM	67.9	87.5	63.5
08:00 AM - 09:00 AM	67.2	85.8	62.2
09:00 AM - 10:00 AM	68.0	91.4	60.4

Leq Average 24 hrs. (dB(A))

66.9

Lmax (dB(A))

92.2

L90 (dB(A))

61.4

Ldn (dB(A))

71.8

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S.

Supot Salamteh
Section Head

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11727-21/ EMAIL

S:\Reports_Air Noise.rpt (10:56AM)



Analysis / Test Report

TESTING
No.0042

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24118736

Date Received : Nov 04, 2024

Date Reported : Nov 08, 2024

Report Number: 3159946-1

Page 1 of 1

Sample Number 24118736-20
Parameter Noise (Leq 24 hrs.)
Location ชุมชนบ้านสวนหลวง (GPS 47P 744360, 1420358)
Measurement Date Oct 28 - Oct 29, 2024
Measurement by Chatchai Sukpia
Sound Level meter Serial No. 597169

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	68.8	91.5	60.0
11:00 AM - 12:00 PM	68.6	86.6	61.8
12:00 PM - 01:00 PM	66.6	90.1	57.2
01:00 PM - 02:00 PM	68.9	92.4	55.5
02:00 PM - 03:00 PM	67.5	88.1	55.0
03:00 PM - 04:00 PM	66.6	87.2	55.1
04:00 PM - 05:00 PM	66.0	91.0	59.8
05:00 PM - 06:00 PM	65.7	86.3	60.3
06:00 PM - 07:00 PM	68.5	85.1	62.1
07:00 PM - 08:00 PM	66.0	84.8	58.0
08:00 PM - 09:00 PM	67.0	87.1	59.8
09:00 PM - 10:00 PM	65.9	87.2	58.6
10:00 PM - 11:00 PM	65.4	86.4	56.2
11:00 PM - 12:00 AM	65.2	85.3	56.5
12:00 AM - 01:00 AM	66.5	85.7	62.1
01:00 AM - 02:00 AM	66.7	85.9	62.3
02:00 AM - 03:00 AM	66.8	85.0	61.1
03:00 AM - 04:00 AM	67.4	85.9	59.5
04:00 AM - 05:00 AM	63.4	80.0	57.0
05:00 AM - 06:00 AM	66.6	87.6	60.0
06:00 AM - 07:00 AM	66.9	87.1	60.5
07:00 AM - 08:00 AM	67.0	76.9	63.3
08:00 AM - 09:00 AM	66.8	89.9	62.3
09:00 AM - 10:00 AM	63.0	85.2	58.1

Leq Average 24 hrs. (dB(A)) 66.8
Lmax (dB(A)) 92.4
L90 (dB(A)) 59.8
Ldn (dB(A)) 72.8
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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ภาคผนวก ค-4

ผลการตรวจวิเคราะห์คุณภาพน้ำทิ้ง



Analysis / Test Report

TESTING
No.0042

Lot ID: 2466474

Date Received : Jul 08, 2024

Date Reported : Jul 12, 2024

Report Number : 3021530-1

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Page 1 of 1

Sample Number	2466474-1
Sampled Date	Jul 08, 2024 10:49 AM
Sample Description	Wastewater
Location	บ่อกักน้ำทิ้ง
Date Analysis Commenced	Jul 08, 2024
Condition of Sample	Contained in one amber glass bottle, two BOD bottle and 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							
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		-	-	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
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	-	-	29.2	≤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	2080	≤3000	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	8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011

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

Chontichak

Chonticha Subongkoch
Scientist (3)

ทะเบียนเลขที่ ว-323-จ-9449

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-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

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 2466474

Date Received : Jul 08, 2024

Date Reported : Jul 12, 2024

Report Number : 3021530-2

Page 1 of 1

Sample Number	2466474-1
Sampled Date	Jul 08, 2024 10:49 AM
Sample Description	Wastewater
Location	บ่อกักน้ำทิ้ง
Date Analysis Commenced	Jul 11, 2024
Condition of Sample	Contained in one amber glass bottle, two BOD bottle and 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							
Dissolved Oxygen	mg/L	-	0.1	7.2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Surawit Narapong

Remark :

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

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Approved by

Chontichak

Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2480541

Date Received : Aug 08, 2024

Date Reported : Aug 14, 2024

Report Number : 3055089-1

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Page 1 of 1

Sample Number	2480541-1						
Sampled Date	Aug 08, 2024 10:50 AM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้ง						
Date Analysis Commenced	Aug 08, 2024						
Condition of Sample	Contained in two BOD bottles, one amber glass bottle and 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							
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		-	-	7.8	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-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.6	≤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	1720	≤3000	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	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-จ-9476

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)

ทะเบียนเลขที่ ว-323-จ-9446

Approved by

D. Changchon.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-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

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 2480541

Date Received : Aug 08, 2024

Date Reported : Aug 14, 2024

Report Number : 3055089-2

Page 1 of 1

Sample Number 2480541-1
Sampled Date Aug 08, 2024 10:50 AM
Sample Description Wastewater
Location บ่อพักน้ำทิ้ง
Date Analysis Commenced Aug 09, 2024
Condition of Sample Contained in two BOD bottles, one amber glass bottle and 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							
Dissolved Oxygen	mg/L	-	0.1	4.2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Paramet Sattayakun

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.

Approved by

Photchana S.

Photchana Seeda

Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Lot ID: 24101381

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number : 3098654-1

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Page 1 of 1

Sample Number	24101381-1
Sampled Date	Sep 05, 2024 10:20 AM
Sample Description	Wastewater
Location	บ่อพักน้ำทิ้ง
Date Analysis Commenced	Sep 05, 2024
Condition of Sample	Contained in one amber glass bottle, two BOD bottles and 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							
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		-	-	7.7	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-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.1	≤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	1660	≤3000	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	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011

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)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Changchon.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101381

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number : 3098654-2

Page 1 of 1

Sample Number	24101381-1
Sampled Date	Sep 05, 2024 10:20 AM
Sample Description	Wastewater
Location	บ่อกักน้ำทิ้ง
Date Analysis Commenced	Sep 09, 2024
Condition of Sample	Contained in one amber glass bottle, two BOD bottles and 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							
Dissolved Oxygen	mg/L	-	0.1	6.4	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

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.

Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

TESTING

No.0042

Lot ID: 24109303

Date Received : Oct 08, 2024

Date Reported : Oct 12, 2024

Report Number : 3117666-1

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Page 1 of 1

Sample Number	24109303-1						
Sampled Date	Oct 08, 2024 11:14 AM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้ง						
Date Analysis Commenced	Oct 08, 2024						
Condition of Sample	Contained in two BOD bottles, one amber glass bottle and 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							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1680	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	9	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011

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)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Changchon.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24109303

Date Received : Oct 08, 2024

Date Reported : Oct 12, 2024

Report Number : 3117666-2

Page 1 of 1

Sample Number	24109303-1
Sampled Date	Oct 08, 2024 11:14 AM
Sample Description	Wastewater
Location	บ่อพักน้ำทิ้ง
Date Analysis Commenced	Oct 09, 2024
Condition of Sample	Contained in two BOD bottles, one amber glass bottle and 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							
Dissolved Oxygen	mg/L	-	0.1	6.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Surawit Narapong

Remark :

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Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong
Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

TESTING
No.0042

Lot ID: 24121219

Date Received : Nov 08, 2024

Date Reported : Nov 13, 2024

Report Number : 3145033-1

Page 1 of 1

Sample Number	24121219-1						
Sampled Date	Nov 08, 2024 10:55 AM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้ง						
Date Analysis Commenced	Nov 08, 2024						
Condition of Sample	Contained in one amber glass bottle, two BOD bottles and 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							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1650	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-จ-0051

Remark :

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Technical Management

Photchana S.

Photchana Seeda

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Changchon.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24121219

Date Received : Nov 08, 2024

Date Reported : Nov 13, 2024

Report Number : 3145033-2

Page 1 of 1

Sample Number	24121219-1
Sampled Date	Nov 08, 2024 10:55 AM
Sample Description	Wastewater
Location	บ่อพักน้ำทิ้ง
Date Analysis Commenced	Nov 09, 2024
Condition of Sample	Contained in one amber glass bottle, two BOD bottles and 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							
Dissolved Oxygen	mg/L	-	0.1	7.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Paramet Sattayakun

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Photchana S.

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Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

TESTING

No.0042

Lot ID: 24132959

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number : 3174024-1

Page 1 of 1

Sample Number	24132959-1
Sampled Date	Dec 03, 2024 10:25 AM
Sample Description	Wastewater
Location	ปลอพักน้ำทิ้ง
Date Analysis Commenced	Dec 03, 2024
Condition of Sample	Contained in two BOD bottles, one amber glass bottle and 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							
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	6.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1930	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011

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Technical Management

Photchana S.

Photchana Seeda

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chuan.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132959

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number : 3174024-2

Page 1 of 1

Sample Number	24132959-1						
Sampled Date	Dec 03, 2024 10:25 AM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้ง						
Date Analysis Commenced	Dec 04, 2024						
Condition of Sample	Contained in two BOD bottles, one amber glass bottle and 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							
Dissolved Oxygen	mg/L	-	0.1	6.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Surawit Narapong

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ภาคผนวก ค-5

ผลการตรวจวัดระดับเสียงภายในสถานประกอบการจากพนักงาน



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai,
Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 24101374

Date Received : Sep 05, 2024
Date Reported : Sep 10, 2024
Report Number : 3098640-1

Page 1 of 2

Sample Number 24101374-1
Sampled Date Sep 04, 2024
Sample Description Noise Dose
Location พนักงาน Maintenance 1
Personal Sampling คุณพีรวิชญ์ พวงสุวรรณ
Date Analysis Commenced Sep 06, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (8 hrs.)	08:45 AM - 04:45 PM	%	-	1	1.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	08:45 AM - 04:45 PM	dB(A)	-	-	67.3	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

- MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)

Sampled By : Norranon Tathongkham

Remark :

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

Approved by

Supot Salamteh
Section Head

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
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Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 24101374

Date Received : Sep 05, 2024
Date Reported : Sep 10, 2024
Report Number : 3098640-1

Page 2 of 2

Sample Number	24101374-2
Sampled Date	Sep 04, 2024
Sample Description	Noise Dose
Location	พนักงาน Maintenance 2
Personal Sampling	คุณชัชพงศ์ นาเนียง
Date Analysis Commenced	Sep 06, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (8 hrs.)	08:45 AM - 04:45 PM	%	-	1	7.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	08:45 AM - 04:45 PM	dB(A)	-	-	73.5	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

- MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)

Sampled By : Norranon Tathongkham

Remark :

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

Approved by

Supot Salamteh
Section Head

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Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24101375

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number : 3098641-1

Page 1 of 2

Sample Number : 24101375-1
Sampled Date : Sep 04, 2024
Sample Description : Noise Dose
Location : พนักงาน Operation 1
Personal Sampling : คุณอุกฤษฏ์ ศรีบุญเรือง
Date Analysis Commenced : Sep 06, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	2.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	2.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	66.5	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	68.2	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

- MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

Sampled By : Norranon Tathongkham

Remark :

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Supot Salamteh
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Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24101375

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number : 3098641-1

Page 2 of 2

Sample Number 24101375-2
Sampled Date Sep 04, 2024
Sample Description Noise Dose
Location พนักงาน Operation 2
Personal Sampling คุณณัฐกิตต์ ราชโส
Date Analysis Commenced Sep 06, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Avg)	07:00 AM - 07:00 PM	%	-	1	1.3	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	1.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Avg)	07:00 AM - 07:00 PM	dB(A)	-	-	64.1	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	65.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

- MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

Sampled By : Norranon Tathongkham

Remark :

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

Approved by

Supot Salamteh
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Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 24132727

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number : 3173435-1

Page 1 of 2

Sample Number 24132727-1
Sampled Date Dec 02, 2024
Sample Description Noise Dose
Location พนักงาน Maintenance 1
Personal Sampling คุณชนพล งานประดิษฐ์
Date Analysis Commenced Dec 04, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (8 hrs.)	08:30 AM - 04:30 PM	%	-	1	11.0	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	08:30 AM - 04:30 PM	dB(A)	-	-	75.4	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

- MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)

Sampled By : Norranon Tathongkham

Remark :

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

Approved by

Supot Salamteh
Section Head

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.
339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai,
Rayong Thailand 21120
P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 24132727

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number : 3173435-1

Page 2 of 2

Sample Number 24132727-2
Sampled Date Dec 02, 2024
Sample Description Noise Dose
Location พนักงาน Maintenance 2
Personal Sampling คุณพีรวิชญ์ พวงสุวรรณ
Date Analysis Commenced Dec 04, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (8 hrs.)	08:30 AM - 04:30 PM	%	-	1	2.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	08:30 AM - 04:30 PM	dB(A)	-	-	69.5	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

- MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)

Sampled By : Norranon Tathongkham

Remark :

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

Approved by

Supot Salamteh
Section Head

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Analysis / Test Report

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Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132728

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number : 3173436-1

Page 1 of 2

Sample Number 24132728-1
Sampled Date Dec 02, 2024
Sample Description Noise Dose
Location พนักงาน Operation 1
Personal Sampling คุณฐานทัพ เจริญศักดิ์
Date Analysis Commenced Dec 04, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	2.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	2.6	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	67.4	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	69.1	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

- MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

Sampled By : Norranon Tathongkham

Remark :

- LOD : Limit of Detection
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P/O : 4107005051
Project Name : โรงไฟฟ้าหนองละลอก 1
Project Location : GNLL

Lot ID: 24132728

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number : 3173436-1

Page 2 of 2

Sample Number 24132728-2
Sampled Date Dec 02, 2024
Sample Description Noise Dose
Location พนักงาน Operation 2
Personal Sampling คุณปฐิพาณ จันทร์กุล
Date Analysis Commenced Dec 04, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	10.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	9.6	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	73.1	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	74.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

- MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

Sampled By : Norranon Tathongkham

Remark :

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

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ภาคผนวก ค-6

ผลการตรวจวัดระดับความร้อนภายในสถานประกอบการ



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai,
Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24101376

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number: 3098642-1

Page 1 of 6

Sample Number 24101376-1
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Sep 04, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Condenser Exhaust Unit	120	30.2	27.8	36.2	34.8
Average (WBGT)		30.2			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
- Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

Supot Salamteh
Section Head

Approved by

Wichan Choonharat
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P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24101376

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number: 3098642-1

Page 2 of 6

Sample Number 24101376-2
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Sep 04, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณท่อส่งไอน้ำ	120	29.4	26.9	35.7	34.3
Average (WBGT)		29.4			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

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P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24101376

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number: 3098642-1

Page 3 of 6

Sample Number 24101376-3
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Sep 04, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Generator 1	120	29.0	26.5	35.2	34.2
Average (WBGT)		29.0			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
- Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

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Section Head

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P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24101376

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number: 3098642-1

Page 4 of 6

Sample Number 24101376-4
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Sep 04, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Generator 2	120	29.2	26.9	35.4	33.1
Average (WBGT)		29.2			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
- Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

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Section Head

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Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24101376

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number: 3098642-1

Page 5 of 6

Sample Number 24101376-5
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Sep 04, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Gas Turbine 1	120	29.7	27.2	35.9	34.5
Average (WBGT)		29.7			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

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P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24101376

Date Received : Sep 05, 2024

Date Reported : Sep 10, 2024

Report Number: 3098642-1

Page 6 of 6

Sample Number 24101376-6
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Sep 04, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Gas Turbine 2	120	28.5	26.4	33.9	32.2
Average (WBGT)		28.5			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

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P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132732

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number: 3173438-1

Page 1 of 6

Sample Number 24132732-1
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Condenser Exhaust Unit	120	33.7	33.4	34.5	34.3
Average (WBGT)		33.7			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
- Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

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Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132732

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number: 3173438-1

Page 2 of 6

Sample Number 24132732-2
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณท่อลำเลียงไอน้ำ	120	29.0	25.7	36.7	36.4
Average (WBGT)		29.0			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

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P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132732

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number: 3173438-1

Page 3 of 6

Sample Number 24132732-3
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Generator1	120	26.5	23.9	32.8	32.4
Average (WBGT)		26.5			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management


Supot Salamteh
Section Head

Approved by


Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai,
Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132732

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number: 3173438-1

Page 4 of 6

Sample Number 24132732-4
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Generator2	120	26.0	23.5	32.0	31.8
Average (WBGT)		26.0			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai,
Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132732

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number: 3173438-1

Page 5 of 6

Sample Number 24132732-5
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Gas Turbine1	120	27.6	25.4	33.0	32.6
Average (WBGT)		27.6			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

Supot Salamteh
Section Head

Approved by

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Client : Gulf JP NLL Co., Ltd.

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Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132732

Date Received : Dec 03, 2024

Date Reported : Dec 07, 2024

Report Number: 3173438-1

Page 6 of 6

Sample Number 24132732-6
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Gas Turbine2	120	27.9	26.0	32.5	32.3
Average (WBGT)		27.9			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

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Section Head

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ภาคผนวก ค-7

ผลการตรวจวัดแสงสว่างภายในสถานประกอบการ



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (1)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (1)-1

Page 1 of 2

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Administration Building : โต๊ะ GA	24101377 (1)-1	4-Sep-24	Day time	1	793	-	400-500	-	Pass
2	Spot : Administration Building : โต๊ะ Purchase	24101377 (1)-2	4-Sep-24	Day time	1	551	-	400-500	-	Pass
3	Spot : Administration Building : โต๊ะ GA Manager	24101377 (1)-3	4-Sep-24	Day time	1	453	-	400-500	-	Pass
4	Spot : Administration Building : EHS Manager Room	24101377 (1)-4	4-Sep-24	Day time	1	731	-	400-500	-	Pass
5	Spot : Administration Building : Plant Manager Room	24101377 (1)-5	4-Sep-24	Day time	1	786	-	400-500	-	Pass
6	Spot : Administration Building : HR Supervisor Room	24101377 (1)-6	4-Sep-24	Day time	1	547	-	400-500	-	Pass
7	Spot : Administration Building : Fax and Copy Room	24101377 (1)-7	4-Sep-24	Day time	1	835	-	300-400	-	Pass
8	Area : Administration Building : Conference Room : โซนโต๊ะประชุม	24101377 (1)-8	4-Sep-24	Day time	1	550	493	150	300	Pass
		24101377 (1)-9	4-Sep-24	Day time	2	458				
		24101377 (1)-10	4-Sep-24	Day time	3	470				
9	Area : Administration Building : Meeting Room : โซนโต๊ะประชุม	24101377 (1)-11	4-Sep-24	Day time	1	735	762	150	300	Pass
		24101377 (1)-12	4-Sep-24	Day time	2	789				
10	Area : Administration Building : Document Room	24101377 (1)-13	4-Sep-24	Day time	1	320	330	150	300	Pass
		24101377 (1)-14	4-Sep-24	Day time	2	340				
11	Area : Administration Building : Walkway in front of Reception	24101377 (1)-15	4-Sep-24	Day time	1	675	626	50	100	Pass
		24101377 (1)-16	4-Sep-24	Day time	2	578				
12	Area : Administration Building : Walkway No.1 : โซนหน้าห้องประชุม	24101377 (1)-17	4-Sep-24	Day time	1	265	356	50	100	Pass
		24101377 (1)-18	4-Sep-24	Day time	2	301				
		24101377 (1)-19	4-Sep-24	Day time	3	502				
13	Area : Administration Building : Canteen & Pantry Room : โซนโต๊ะอาหาร	24101377 (1)-20	4-Sep-24	Day time	1	785	726	150	300	Pass
		24101377 (1)-21	4-Sep-24	Day time	2	668				
14	Area : Administration Building : Office supply Room (ห้องเก็บของ) : โซนวางของ	24101377 (1)-22	4-Sep-24	Day time	1	339	310	50	100	Pass
		24101377 (1)-23	4-Sep-24	Day time	2	281				

Technical Management

Supot S.

Supot Salamteh
Section Head

Approved by

Nichan Chuan

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (1)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (1)-1

Page 2 of 2

GNLL										
Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
15	Area : Administration Building : PPE Storage Room	24101377 (1)-24	4-Sep-24	Day time	1	679	664	50	100	Pass
		24101377 (1)-25	4-Sep-24	Day time	2	650				
16	Area : Administration Building : Rest Room (lady)	24101377 (1)-26	4-Sep-24	Day time	1	1,132	1025	50	100	Pass
		24101377 (1)-27	4-Sep-24	Day time	2	998				
		24101377 (1)-28	4-Sep-24	Day time	3	946				
17	Area : Administration Building : Rest Room (Man)	24101377 (1)-29	4-Sep-24	Day time	1	610	631	50	100	Pass
		24101377 (1)-30	4-Sep-24	Day time	2	649				
		24101377 (1)-31	4-Sep-24	Day time	3	633				
18	Area : Administration Building : Server Room	24101377 (1)-32	4-Sep-24	Day time	1	422	412	100	200	Pass
		24101377 (1)-33	4-Sep-24	Day time	2	403				
19	Area : Administration Building : Utility Room : โรงงานรอง	24101377 (1)-34	4-Sep-24	Day time	1	330	341	50	100	Pass
		24101377 (1)-35	4-Sep-24	Day time	2	352				
20	Spot : Administration Building : Purchaseing helper	24101377 (1)-36	4-Sep-24	Day time	1	550	-	400-500	-	Pass
21	Spot : Administration Building : GA Helper	24101377 (1)-37	4-Sep-24	Day time	1	770	-	400-500	-	Pass

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh
Section Head

Approved by

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (2)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (2)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Electrical and Control Building : GTG & HRSG Unit 11 : HRSG 11 CEMs Room Air Condition	24101377 (2)-1	4-Sep-24	Day time	1	959	-	200-300	-	Pass
		24101377 (2)-2	4-Sep-24	Night time	1	767	-	200-300	-	Pass
2	Spot : Electrical and Control Building : GTG & HRSG Unit 12 : HRSG 12 CEMs Room Air Condition	24101377 (2)-3	4-Sep-24	Day time	1	632	-	200-300	-	Pass
		24101377 (2)-4	4-Sep-24	Night time	1	452	-	200-300	-	Pass
3	Area : Electrical and Control Building : GTG & HRSG Unit 11 : Battery Room	24101377 (2)-5	4-Sep-24	Day time	1	405	402	50	100	Pass
		24101377 (2)-6	4-Sep-24	Day time	2	398				
		24101377 (2)-7	4-Sep-24	Night time	1	363	340	50	100	Pass
		24101377 (2)-8	4-Sep-24	Night time	2	318				
4	Area : Electrical and Control Building : GTG & HRSG Unit 12 : Battery Room	24101377 (2)-9	4-Sep-24	Day time	1	556	529	50	100	Pass
		24101377 (2)-10	4-Sep-24	Day time	2	502				
		24101377 (2)-11	4-Sep-24	Night time	1	381	379	50	100	Pass
		24101377 (2)-12	4-Sep-24	Night time	2	377				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh
Section Head

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Wichan Choonharat
Assistant Manager

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Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (3)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (3)-1

Page 1 of 1

Lay out No.	Location	Reference Number	Date	Time	No.	GNLL Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Area : Electrical and Control Building : 2nd Floor : Walkway	24101377 (3)-1	4-Sep-24	Day time	1	332	442	50	100	Pass
		24101377 (3)-2	4-Sep-24	Day time	2	463				
		24101377 (3)-3	4-Sep-24	Day time	3	541				
		24101377 (3)-4	4-Sep-24	Day time	4	433				
		24101377 (3)-5	4-Sep-24	Day time	5	440				
		24101377 (3)-6	4-Sep-24	Night time	1	210	248	50	100	Pass
		24101377 (3)-7	4-Sep-24	Night time	2	242				
		24101377 (3)-8	4-Sep-24	Night time	3	267				
		24101377 (3)-9	4-Sep-24	Night time	4	272				
		24101377 (3)-10	4-Sep-24	Night time	5	250				
2	Area : Electrical and Control Building : 2nd Floor : Switch Gear Room : โชนพม่า	24101377 (3)-11	4-Sep-24	Day time	1	310	319	100	200	Pass
		24101377 (3)-12	4-Sep-24	Day time	2	332				
		24101377 (3)-13	4-Sep-24	Day time	3	327				
		24101377 (3)-14	4-Sep-24	Day time	4	315				
		24101377 (3)-15	4-Sep-24	Day time	5	320				
		24101377 (3)-16	4-Sep-24	Day time	6	310				
		24101377 (3)-17	4-Sep-24	Night time	1	265	285	100	200	Pass
		24101377 (3)-18	4-Sep-24	Night time	2	268				
		24101377 (3)-19	4-Sep-24	Night time	3	280				
		24101377 (3)-20	4-Sep-24	Night time	4	302				
		24101377 (3)-21	4-Sep-24	Night time	5	305				
		24101377 (3)-22	4-Sep-24	Night time	6	290				
3	Area : Electrical and Control Building : 2nd Floor : MCC Control Room Floor 2 : Battery Room	24101377 (3)-23	4-Sep-24	Day time	1	466	475	50	100	Pass
		24101377 (3)-24	4-Sep-24	Day time	2	484				
		24101377 (3)-25	4-Sep-24	Night time	1	408	412	50	100	Pass
		24101377 (3)-26	4-Sep-24	Night time	2	416				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot S.

Supot Salamteh
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (4)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (4)-1

Page 1 of 2

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Electrical and Control Building : 3rd Floor : Engineering Room	24101377 (4)-1	4-Sep-24	Day time	1	480	-	400-500	-	Pass
2	Spot : Electrical and Control Building : 3rd Floor : Assistance Warehouse & Inventory	24101377 (4)-2 24101377 (4)-3	4-Sep-24 4-Sep-24	Day time Night time	1 1	465 446	- -	400-500 400-500	- -	Pass Pass
3	Spot : Electrical and Control Building : 3rd Floor : Operation Manager Room	24101377 (4)-4	4-Sep-24	Day time	1	634	-	400-500	-	Pass
4	Area : Electrical and Control Building : 3rd Floor : HVAC Room : โซนหน้าตู้ควบคุม	24101377 (4)-5 24101377 (4)-6 24101377 (4)-7 24101377 (4)-8	4-Sep-24 4-Sep-24 4-Sep-24 4-Sep-24	Day time Day time Night time Night time	1 2 1 2	307 313 302 308	310 305	100 100	200 200	Pass Pass
5	Spot : Electrical and Control Building : 3rd Floor : โต๊ะ Control Room No.1	24101377 (4)-9 24101377 (4)-10	4-Sep-24 4-Sep-24	Day time Night time	1 1	645 635	- -	400-500 400-500	- -	Pass Pass
6	Spot : Electrical and Control Building : 3rd Floor : โต๊ะ Control Room No.2	24101377 (4)-11 24101377 (4)-12	4-Sep-24 4-Sep-24	Day time Night time	1 1	423 404	- -	400-500 400-500	- -	Pass Pass
7	Area : Electrical and Control Building : 3rd Floor : DCS Room : โซนกลาง	24101377 (4)-13 24101377 (4)-14 24101377 (4)-15 24101377 (4)-16 24101377 (4)-17 24101377 (4)-18	4-Sep-24 4-Sep-24 4-Sep-24 4-Sep-24 4-Sep-24 4-Sep-24	Day time Day time Day time Night time Night time Night time	1 2 3 1 2 3	882 781 766 535 542 530	810 536	100 100	200 200	Pass Pass
8	Area : Electrical and Control Building : 3rd Floor : Walkway No.1 : โซนทางเข้า Control Room	24101377 (4)-19 24101377 (4)-20 24101377 (4)-21 24101377 (4)-22	4-Sep-24 4-Sep-24 4-Sep-24 4-Sep-24	Day time Day time Night time Night time	1 2 1 2	863 528 550 505	696 528	50 50	100 100	Pass Pass
9	Area : Electrical and Control Building : 3rd Floor : Canteen & Pantry Room	24101377 (4)-23 24101377 (4)-24 24101377 (4)-25 24101377 (4)-26	4-Sep-24 4-Sep-24 4-Sep-24 4-Sep-24	Day time Day time Night time Night time	1 2 1 2	837 690 780 755	764 768	150 150	300 300	Pass Pass
10	Area : Electrical and Control Building : 3rd Floor : Document Room	24101377 (4)-27 24101377 (4)-28	4-Sep-24 4-Sep-24	Day time Day time	1 2	647 864	756	150	300	Pass

Technical Management

Supot S.

Supot Salamteh
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (4)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (4)-1

Page 2 of 2

GNLL										
Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
11	Area : Electrical and Control Building : 3rd Floor : Rest Room (lady)	24101377 (4)-29	4-Sep-24	Day time	1	734	590	50	100	Pass
		24101377 (4)-30	4-Sep-24	Day time	2	446				
		24101377 (4)-31	4-Sep-24	Night time	1	220	212	50	100	Pass
		24101377 (4)-32	4-Sep-24	Night time	2	203				
12	Area : Electrical and Control Building : 3rd Floor : Rest Room (Man)	24101377 (4)-33	4-Sep-24	Day time	1	336	354	50	100	Pass
		24101377 (4)-34	4-Sep-24	Day time	2	372				
		24101377 (4)-35	4-Sep-24	Night time	1	254	243	50	100	Pass
		24101377 (4)-36	4-Sep-24	Night time	2	232				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh
Section Head

Approved by

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (5)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (5)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Area : Guard house Building : Guard Room	24101377 (5)-1	4-Sep-24	Day time	1	3,702	3581	-	100	Pass
		24101377 (5)-2	4-Sep-24	Day time	2	3,460				
		24101377 (5)-3	4-Sep-24	Night time	1	183	169	-	100	Pass
		24101377 (5)-4	4-Sep-24	Night time	2	155				
2	Area : Guard house Building : Locker Room	24101377 (5)-5	4-Sep-24	Day time	1	447	449	50	100	Pass
		24101377 (5)-6	4-Sep-24	Day time	2	451				
		24101377 (5)-7	4-Sep-24	Night time	1	392	386	50	100	Pass
		24101377 (5)-8	4-Sep-24	Night time	2	379				
3	Area : Guard house Building : Rest Room	24101377 (5)-9	4-Sep-24	Day time	1	526	518	50	100	Pass
		24101377 (5)-10	4-Sep-24	Day time	2	511				
		24101377 (5)-11	4-Sep-24	Night time	1	190	184	50	100	Pass
		24101377 (5)-12	4-Sep-24	Night time	2	178				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (6)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (6)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Area : Substation Building : 1st Floor : Terminal Substation : โซนหน้าตู้ควบคุม	24101377 (6)-1	4-Sep-24	Day time	1	787	597	100	200	Pass
		24101377 (6)-2	4-Sep-24	Day time	2	554				
		24101377 (6)-3	4-Sep-24	Day time	3	566				
		24101377 (6)-4	4-Sep-24	Day time	4	530				
		24101377 (6)-5	4-Sep-24	Day time	5	550				
		24101377 (6)-6	4-Sep-24	Night time	1	637	489	100	200	Pass
		24101377 (6)-7	4-Sep-24	Night time	2	462				
		24101377 (6)-8	4-Sep-24	Night time	3	456				
		24101377 (6)-9	4-Sep-24	Night time	4	450				
		24101377 (6)-10	4-Sep-24	Night time	5	441				
2	Area : Substation Building : 1st Floor : Terminal Substation : Battery Room	24101377 (6)-11	4-Sep-24	Day time	1	220	228	50	100	Pass
		24101377 (6)-12	4-Sep-24	Day time	2	237				
		24101377 (6)-13	4-Sep-24	Night time	1	206	210	50	100	Pass
		24101377 (6)-14	4-Sep-24	Night time	2	213				
3	Area : Substation Building : 1st Floor : Switchyard Substation No.1 : โซนหน้าตู้ควบคุม	24101377 (6)-15	4-Sep-24	Day time	1	505	447	100	200	Pass
		24101377 (6)-16	4-Sep-24	Day time	2	432				
		24101377 (6)-17	4-Sep-24	Day time	3	404				
		24101377 (6)-18	4-Sep-24	Night time	1	393	342	100	200	Pass
		24101377 (6)-19	4-Sep-24	Night time	2	325				
		24101377 (6)-20	4-Sep-24	Night time	3	307				
4	Area : Substation Building : 1st Floor : Switchyard Substation No.2 : โซนหน้าตู้ควบคุม	24101377 (6)-21	4-Sep-24	Day time	1	255	294	100	200	Pass
		24101377 (6)-22	4-Sep-24	Day time	2	268				
		24101377 (6)-23	4-Sep-24	Day time	3	359				
		24101377 (6)-24	4-Sep-24	Night time	1	341	345	100	200	Pass
		24101377 (6)-25	4-Sep-24	Night time	2	360				
		24101377 (6)-26	4-Sep-24	Night time	3	335				
5	Area : Substation Building : 1st Floor : Switchyard Substation : Battery Room	24101377 (6)-27	4-Sep-24	Day time	1	223	226	50	100	Pass
		24101377 (6)-28	4-Sep-24	Day time	2	230				
		24101377 (6)-29	4-Sep-24	Night time	1	205	208	50	100	Pass
		24101377 (6)-30	4-Sep-24	Night time	2	212				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh
Section Head

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Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (7)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (7)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Water Treatment Plant Building : Lab Room : วัด pH	24101377 (7)-1	4-Sep-24	Day time	1	968	-	400-500	-	Pass
		24101377 (7)-2	4-Sep-24	Night time	1	650	-	400-500	-	Pass
2	Area : Water Treatment Plant Building : Rest Room (lady)	24101377 (7)-3	4-Sep-24	Day time	1	250	241	50	100	Pass
		24101377 (7)-4	4-Sep-24	Day time	2	232				
		24101377 (7)-5	4-Sep-24	Night time	1	205	204	50	100	Pass
		24101377 (7)-6	4-Sep-24	Night time	2	202				
3	Area : Water Treatment Plant Building : Rest Room (Man)	24101377 (7)-7	4-Sep-24	Day time	1	248	256	50	100	Pass
		24101377 (7)-8	4-Sep-24	Day time	2	263				
		24101377 (7)-9	4-Sep-24	Night time	1	210	214	50	100	Pass
		24101377 (7)-10	4-Sep-24	Night time	2	218				
4	Area : Water Treatment Plant Building : Walkway : โฉนหน้าห้อง Demin Control Room	24101377 (7)-11	4-Sep-24	Day time	1	4,250	4032	50	100	Pass
		24101377 (7)-12	4-Sep-24	Day time	2	3,875				
		24101377 (7)-13	4-Sep-24	Day time	3	3,970				
		24101377 (7)-14	4-Sep-24	Night time	1	350	257	50	100	Pass
		24101377 (7)-15	4-Sep-24	Night time	2	213				
		24101377 (7)-16	4-Sep-24	Night time	3	207				
5	Spot : Water Treatment Plant Building : วัด Chemist	24101377 (7)-17	4-Sep-24	Day time	1	626	-	400-500	-	Pass
		24101377 (7)-18	4-Sep-24	Night time	1	416	-	400-500	-	Pass
6	Area : Water Treatment Plant Building : LCR Demin Plant Room : โฉนหน้าตู้ Control	24101377 (7)-19	4-Sep-24	Day time	1	442	454	100	200	Pass
		24101377 (7)-20	4-Sep-24	Day time	2	465				
		24101377 (7)-21	4-Sep-24	Night time	1	402	410	100	200	Pass
		24101377 (7)-22	4-Sep-24	Night time	2	418				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh
Section Head

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (8)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (8)-1

Page 1 of 2

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Workshop and Warehouse Building : 2nd Floor : C&I Room	24101377 (8)-1	4-Sep-24	Day time	1	447	-	400-500	-	Pass
2	Spot : Workshop and Warehouse Building : 2nd Floor : Mechanical Room	24101377 (8)-2	4-Sep-24	Day time	1	416	-	400-500	-	Pass
3	Spot : Workshop and Warehouse Building : 2nd Floor : Electrical Room	24101377 (8)-3	4-Sep-24	Day time	1	422	-	400-500	-	Pass
4	Spot : Workshop and Warehouse Building : 2nd Floor : Maintenance Manager Room	24101377 (8)-4	4-Sep-24	Day time	1	510	-	400-500	-	Pass
5	Area : Workshop and Warehouse Building : 2nd Floor : Canteen Room & Pantry Room : โซนโต๊ะอาหาร	24101377 (8)-5	4-Sep-24	Day time	1	636	576	150	300	Pass
		24101377 (8)-6	4-Sep-24	Day time	2	517				
6	Spot : Workshop and Warehouse Building : 2nd Floor : Copy Machine Room	24101377 (8)-7	4-Sep-24	Day time	1	904	-	300-400	-	Pass
7	Area : Workshop and Warehouse Building : 2nd Floor : Maid Room	24101377 (8)-8	4-Sep-24	Day time	1	368	347	50	100	Pass
		24101377 (8)-9	4-Sep-24	Day time	2	326				
8	Area : Workshop and Warehouse Building : 2nd Floor : Meeting Room : โซนโต๊ะประชุม	24101377 (8)-10	4-Sep-24	Day time	1	550	552	150	300	Pass
		24101377 (8)-11	4-Sep-24	Day time	2	507				
		24101377 (8)-12	4-Sep-24	Day time	3	598				
9	Area : Workshop and Warehouse Building : 2nd Floor : Walkway No.1	24101377 (8)-13	4-Sep-24	Day time	1	335	258	50	100	Pass
		24101377 (8)-14	4-Sep-24	Day time	2	280				
		24101377 (8)-15	4-Sep-24	Day time	3	200				
		24101377 (8)-16	4-Sep-24	Day time	4	216				
10	Area : Workshop and Warehouse Building : 2nd Floor : Walkway No.2	24101377 (8)-17	4-Sep-24	Day time	1	402	470	50	100	Pass
		24101377 (8)-18	4-Sep-24	Day time	2	501				
		24101377 (8)-19	4-Sep-24	Day time	3	471				
		24101377 (8)-20	4-Sep-24	Day time	4	508				
11	Area : Workshop and Warehouse Building : 2nd Floor : Rest Room (Man)	24101377 (8)-21	4-Sep-24	Day time	1	257	270	50	100	Pass
		24101377 (8)-22	4-Sep-24	Day time	2	270				
		24101377 (8)-23	4-Sep-24	Day time	3	284				
		24101377 (8)-24	4-Sep-24	Day time	4	268				
12	Area : Workshop and Warehouse Building : 2nd Floor : Document Room 1-2	24101377 (8)-25	4-Sep-24	Day time	1	330	322	150	300	Pass
		24101377 (8)-26	4-Sep-24	Day time	2	314				

Technical Management

Supot Salamteh
Section Head

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Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (8)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (8)-1

Page 2 of 2

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
13	Spot : Workshop and Warehouse Building : 2nd Floor : IT Officer	24101377 (8)-27	4-Sep-24	Day time	1	657	-	400-500	-	Pass

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24101377 (9)

Date Received : Sep 05, 2024

Date Reported : Sep 12, 2024

Report Number: 24101377 (9)-1

Page 1 of 1

GNLL										
Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Area : Workshop and Warehouse Building : Ground Floor : LTSA Room : โซนหลัง	24101377 (9)-1	4-Sep-24	Day time	1	556	582	50	100	Pass
		24101377 (9)-2	4-Sep-24	Day time	2	627				
		24101377 (9)-3	4-Sep-24	Day time	3	567				
		24101377 (9)-4	4-Sep-24	Day time	4	580				
2	Area : Workshop and Warehouse Building : Ground Floor : Walkway No.1 : โซนหน้า Workshop	24101377 (9)-5	4-Sep-24	Day time	1	505	473	50	100	Pass
		24101377 (9)-6	4-Sep-24	Day time	2	441				
3	Area : Workshop and Warehouse Building : Ground Floor : Workshop : พื้นที่โซน ปฏิบัติการ	24101377 (9)-7	4-Sep-24	Day time	1	440	549	50	100	Pass
		24101377 (9)-8	4-Sep-24	Day time	2	620				
		24101377 (9)-9	4-Sep-24	Day time	3	566				
		24101377 (9)-10	4-Sep-24	Day time	4	570				
4	Area : Workshop and Warehouse Building : Ground Floor : Spare Room : โซนกลาง	24101377 (9)-11	4-Sep-24	Day time	1	195	212	50	100	Pass
		24101377 (9)-12	4-Sep-24	Day time	2	217				
		24101377 (9)-13	4-Sep-24	Day time	3	223				
		24101377 (9)-14	4-Sep-24	Day time	4	212				
5	Area : Workshop and Warehouse Building : Ground Floor : Tool Room	24101377 (9)-15	4-Sep-24	Day time	1	198	209	50	100	Pass
		24101377 (9)-16	4-Sep-24	Day time	2	220				
6	Spot : Workshop and Warehouse Building : Ground Floor : Warehouse Officer	24101377 (9)-17	4-Sep-24	Day time	1	528	-	400-500	-	Pass
7	Area : Workshop and Warehouse Building : Ground Floor : Rest Room (Man)	24101377 (9)-18	4-Sep-24	Day time	1	407	397	50	100	Pass
		24101377 (9)-19	4-Sep-24	Day time	2	398				
		24101377 (9)-20	4-Sep-24	Day time	3	386				
8	Area : Workshop and Warehouse Building : Ground Floor : Rest Room (lady)	24101377 (9)-21	4-Sep-24	Day time	1	330	308	50	100	Pass
		24101377 (9)-22	4-Sep-24	Day time	2	284				
		24101377 (9)-23	4-Sep-24	Day time	3	310				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (1)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (1)-1

Page 1 of 2

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Administration Building : โต๊ะ GA	24132733 (1)-1	2-Dec-24	Day time	1	818	-	400-500	-	Pass
2	Spot : Administration Building : โต๊ะ Purchase	24132733 (1)-2	2-Dec-24	Day time	1	479	-	400-500	-	Pass
3	Spot : Administration Building : โต๊ะ GA Manager	24132733 (1)-3	2-Dec-24	Day time	1	669	-	400-500	-	Pass
4	Spot : Administration Building : EHS Manager Room	24132733 (1)-4	2-Dec-24	Day time	1	602	-	400-500	-	Pass
5	Spot : Administration Building : Plant Manager Room	24132733 (1)-5	2-Dec-24	Day time	1	566	-	400-500	-	Pass
6	Spot : Administration Building : HR Supervisor Room	24132733 (1)-6	2-Dec-24	Day time	1	967	-	400-500	-	Pass
7	Spot : Administration Building : Fax and Copy Room	24132733 (1)-7	2-Dec-24	Day time	1	532	-	300-400	-	Pass
8	Area : Administration Building : Conference Room : โชนโต๊ะประชุม	24132733 (1)-8	2-Dec-24	Day time	1	458	489	150	300	Pass
		24132733 (1)-9	2-Dec-24	Day time	2	442				
		24132733 (1)-10	2-Dec-24	Day time	3	568				
9	Area : Administration Building : Meeting Room : โชนโต๊ะประชุม	24132733 (1)-11	2-Dec-24	Day time	1	662	670	150	300	Pass
		24132733 (1)-12	2-Dec-24	Day time	2	678				
10	Area : Administration Building : Document Room	24132733 (1)-13	2-Dec-24	Day time	1	304	305	150	300	Pass
		24132733 (1)-14	2-Dec-24	Day time	2	306				
11	Area : Administration Building : Walkway in front of Reception	24132733 (1)-15	2-Dec-24	Day time	1	525	529	50	100	Pass
		24132733 (1)-16	2-Dec-24	Day time	2	533				
12	Area : Administration Building : Walkway No.1 : โชนหน้าห้องประชุม	24132733 (1)-17	2-Dec-24	Day time	1	363	346	50	100	Pass
		24132733 (1)-18	2-Dec-24	Day time	2	351				
		24132733 (1)-19	2-Dec-24	Day time	3	323				
13	Area : Administration Building : Canteen & Pantry Room : โชนโต๊ะอาหาร	24132733 (1)-20	2-Dec-24	Day time	1	995	990	150	300	Pass
		24132733 (1)-21	2-Dec-24	Day time	2	984				
14	Area : Administration Building : Office supply Room (ห้องเก็บของ) : โชนวางของ	24132733 (1)-22	2-Dec-24	Day time	1	455	459	50	100	Pass
		24132733 (1)-23	2-Dec-24	Day time	2	463				

Technical Management

Supot S.

Supot Salamteh
Section Head

Approved by

Nichan Chonharat

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (1)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (1)-1

Page 2 of 2

Lay out No.	Location	Reference Number	Date	Time	No.	GNLL Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
15	Area : Administration Building : PPE Storage Room	24132733 (1)-24	2-Dec-24	Day time	1	554	557	50	100	Pass
		24132733 (1)-25	2-Dec-24	Day time	2	560				
16	Area : Administration Building : Rest Room (lady)	24132733 (1)-26	2-Dec-24	Day time	1	1,650	1177	50	100	Pass
		24132733 (1)-27	2-Dec-24	Day time	2	935				
		24132733 (1)-28	2-Dec-24	Day time	3	947				
17	Area : Administration Building : Rest Room (Man)	24132733 (1)-29	2-Dec-24	Day time	1	735	722	50	100	Pass
		24132733 (1)-30	2-Dec-24	Day time	2	721				
		24132733 (1)-31	2-Dec-24	Day time	3	711				
18	Area : Administration Building : Server Room	24132733 (1)-32	2-Dec-24	Day time	1	230	237	100	200	Pass
		24132733 (1)-33	2-Dec-24	Day time	2	244				
19	Area : Administration Building : Utility Room : โซนวางของ	24132733 (1)-34	2-Dec-24	Day time	1	286	288	50	100	Pass
		24132733 (1)-35	2-Dec-24	Day time	2	290				
20	Spot : Administration Building : Purchaseing helper	24132733 (1)-36	2-Dec-24	Day time	1	458	-	400-500	-	Pass
21	Spot : Administration Building : GA Helper	24132733 (1)-37	2-Dec-24	Day time	1	718	-	400-500	-	Pass

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot S

Supot Salamteh
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (2)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (2)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Electrical and Control Building : GTG & HRSG Unit 11 : HRSG 11 CEMs Room Air Condition	24132733 (2)-1	2-Dec-24	Day time	1	983	-	200-300	-	Pass
		24132733 (2)-2	2-Dec-24	Night time	1	885	-	200-300	-	Pass
2	Spot : Electrical and Control Building : GTG & HRSG Unit 12 : HRSG 12 CEMs Room Air Condition	24132733 (2)-3	2-Dec-24	Day time	1	987	-	200-300	-	Pass
		24132733 (2)-4	2-Dec-24	Night time	1	594	-	200-300	-	Pass
3	Area : Electrical and Control Building : GTG & HRSG Unit 11 : Battery Room	24132733 (2)-5	2-Dec-24	Day time	1	380	372	50	100	Pass
		24132733 (2)-6	2-Dec-24	Day time	2	364				
		24132733 (2)-7	2-Dec-24	Night time	1	379	370	50	100	Pass
		24132733 (2)-8	2-Dec-24	Night time	2	360				
4	Area : Electrical and Control Building : GTG & HRSG Unit 12 : Battery Room	24132733 (2)-9	2-Dec-24	Day time	1	362	362	50	100	Pass
		24132733 (2)-10	2-Dec-24	Day time	2	361				
		24132733 (2)-11	2-Dec-24	Night time	1	358	354	50	100	Pass
		24132733 (2)-12	2-Dec-24	Night time	2	350				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salmteah
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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (3)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (3)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Area : Electrical and Control Building : 2nd Floor : Walkway	24132733 (3)-1	2-Dec-24	Day time	1	240	186	50	100	Pass
		24132733 (3)-2	2-Dec-24	Day time	2	199				
		24132733 (3)-3	2-Dec-24	Day time	3	187				
		24132733 (3)-4	2-Dec-24	Day time	4	165				
		24132733 (3)-5	2-Dec-24	Day time	5	140				
		24132733 (3)-6	2-Dec-24	Night time	1	142	125	50	100	Pass
		24132733 (3)-7	2-Dec-24	Night time	2	128				
		24132733 (3)-8	2-Dec-24	Night time	3	119				
		24132733 (3)-9	2-Dec-24	Night time	4	110				
		24132733 (3)-10	2-Dec-24	Night time	5	127				
2	Area : Electrical and Control Building : 2nd Floor : Switch Gear Room : โขงหน้	24132733 (3)-11	2-Dec-24	Day time	1	223	254	100	200	Pass
		24132733 (3)-12	2-Dec-24	Day time	2	205				
		24132733 (3)-13	2-Dec-24	Day time	3	270				
		24132733 (3)-14	2-Dec-24	Day time	4	284				
		24132733 (3)-15	2-Dec-24	Day time	5	266				
		24132733 (3)-16	2-Dec-24	Day time	6	275				
		24132733 (3)-17	2-Dec-24	Night time	1	217	234	100	200	Pass
		24132733 (3)-18	2-Dec-24	Night time	2	212				
		24132733 (3)-19	2-Dec-24	Night time	3	232				
		24132733 (3)-20	2-Dec-24	Night time	4	237				
		24132733 (3)-21	2-Dec-24	Night time	5	248				
		24132733 (3)-22	2-Dec-24	Night time	6	260				
3	Area : Electrical and Control Building : 2nd Floor : MCC Control Room Floor 2 : Battery Room	24132733 (3)-23	2-Dec-24	Day time	1	310	323	50	100	Pass
		24132733 (3)-24	2-Dec-24	Day time	2	336				
		24132733 (3)-25	2-Dec-24	Night time	1	314	318	50	100	Pass
		24132733 (3)-26	2-Dec-24	Night time	2	323				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (4)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (4)-1

Page 1 of 2

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Electrical and Control Building : 3rd Floor : Engineering Room	24132733 (4)-1	2-Dec-24	Day time	1	483	-	400-500	-	Pass
2	Spot : Electrical and Control Building : 3rd Floor : Shift Operation Room	24132733 (4)-2	2-Dec-24	Day time	1	785	-	400-500	-	Pass
		24132733 (4)-3	2-Dec-24	Night time	1	773	-	400-500	-	Pass
3	Spot : Electrical and Control Building : 3rd Floor : Operation Manager Room	24132733 (4)-4	2-Dec-24	Day time	1	733	-	400-500	-	Pass
4	Area : Electrical and Control Building : 3rd Floor : HVAC Room : โซนหน้าตู้ควบคุม	24132733 (4)-5	2-Dec-24	Day time	1	303	298	100	200	Pass
		24132733 (4)-6	2-Dec-24	Day time	2	294				
		24132733 (4)-7	2-Dec-24	Night time	1	306	269	100	200	Pass
		24132733 (4)-8	2-Dec-24	Night time	2	232				
5	Spot : Electrical and Control Building : 3rd Floor : ใต้ Control Room No.1	24132733 (4)-9	2-Dec-24	Day time	1	691	-	400-500	-	Pass
		24132733 (4)-10	2-Dec-24	Night time	1	680	-	400-500	-	Pass
6	Spot : Electrical and Control Building : 3rd Floor : ใต้ Control Room No.2	24132733 (4)-11	2-Dec-24	Day time	1	636	-	400-500	-	Pass
		24132733 (4)-12	2-Dec-24	Night time	1	539	-	400-500	-	Pass
7	Area : Electrical and Control Building : 3rd Floor : DCS Room : โซนกลาง	24132733 (4)-13	2-Dec-24	Day time	1	632	623	100	200	Pass
		24132733 (4)-14	2-Dec-24	Day time	2	618				
		24132733 (4)-15	2-Dec-24	Day time	3	620				
		24132733 (4)-16	2-Dec-24	Night time	1	640	619	100	200	Pass
		24132733 (4)-17	2-Dec-24	Night time	2	605				
		24132733 (4)-18	2-Dec-24	Night time	3	611				
8	Area : Electrical and Control Building : 3rd Floor : Walkway No.1 : โซนทางเข้า Control Room	24132733 (4)-19	2-Dec-24	Day time	1	786	795	50	100	Pass
		24132733 (4)-20	2-Dec-24	Day time	2	804				
		24132733 (4)-21	2-Dec-24	Night time	1	781	792	50	100	Pass
		24132733 (4)-22	2-Dec-24	Night time	2	803				
9	Area : Electrical and Control Building : 3rd Floor : Canteen & Pantry Room	24132733 (4)-23	2-Dec-24	Day time	1	910	898	150	300	Pass
		24132733 (4)-24	2-Dec-24	Day time	2	886				
		24132733 (4)-25	2-Dec-24	Night time	1	735	741	150	300	Pass
		24132733 (4)-26	2-Dec-24	Night time	2	747				
10	Area : Electrical and Control Building : 3rd Floor : Document Room	24132733 (4)-27	2-Dec-24	Day time	1	611	614	150	300	Pass
		24132733 (4)-28	2-Dec-24	Day time	2	618				

Technical Management

Supot S.

Supot Salamteh
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (4)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (4)-1

Page 2 of 2

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
11	Area : Electrical and Control Building : 3rd Floor : Rest Room (lady)	24132733 (4)-29	2-Dec-24	Day time	1	516	500	50	100	Pass
		24132733 (4)-30	2-Dec-24	Day time	2	483				
		24132733 (4)-31	2-Dec-24	Night time	1	420	342	50	100	Pass
		24132733 (4)-32	2-Dec-24	Night time	2	263				
12	Area : Electrical and Control Building : 3rd Floor : Rest Room (Man)	24132733 (4)-33	2-Dec-24	Day time	1	343	336	50	100	Pass
		24132733 (4)-34	2-Dec-24	Day time	2	328				
		24132733 (4)-35	2-Dec-24	Night time	1	327	320	50	100	Pass
		24132733 (4)-36	2-Dec-24	Night time	2	312				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

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339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (5)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (5)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Area : Guard house Building : Guard Room	24132733 (5)-1	2-Dec-24	Day time	1	2,600	2612	-	100	Pass
		24132733 (5)-2	2-Dec-24	Day time	2	2,625				
		24132733 (5)-3	2-Dec-24	Night time	1	256	250	-	100	Pass
		24132733 (5)-4	2-Dec-24	Night time	2	244				
2	Area : Guard house Building : Locker Room	24132733 (5)-5	2-Dec-24	Day time	1	314	323	50	100	Pass
		24132733 (5)-6	2-Dec-24	Day time	2	332				
		24132733 (5)-7	2-Dec-24	Night time	1	330	326	50	100	Pass
		24132733 (5)-8	2-Dec-24	Night time	2	323				
3	Area : Guard house Building : Rest Room	24132733 (5)-9	2-Dec-24	Day time	1	425	418	50	100	Pass
		24132733 (5)-10	2-Dec-24	Day time	2	411				
		24132733 (5)-11	2-Dec-24	Night time	1	212	210	50	100	Pass
		24132733 (5)-12	2-Dec-24	Night time	2	207				

Measurement by : Norranon Tathongkham

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339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (6)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (6)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Area : Substation Building : 1st Floor : Terminal Substation : โซนหน้าตู้ควบคุม	24132733 (6)-1	2-Dec-24	Day time	1	991	913	100	200	Pass
		24132733 (6)-2	2-Dec-24	Day time	2	880				
		24132733 (6)-3	2-Dec-24	Day time	3	898				
		24132733 (6)-4	2-Dec-24	Day time	4	910				
		24132733 (6)-5	2-Dec-24	Day time	5	885				
		24132733 (6)-6	2-Dec-24	Night time	1	446	468	100	200	Pass
		24132733 (6)-7	2-Dec-24	Night time	2	470				
		24132733 (6)-8	2-Dec-24	Night time	3	465				
		24132733 (6)-9	2-Dec-24	Night time	4	492				
		24132733 (6)-10	2-Dec-24	Night time	5	466				
2	Area : Substation Building : 1st Floor : Terminal Substation : Battery Room	24132733 (6)-11	2-Dec-24	Day time	1	307	309	50	100	Pass
		24132733 (6)-12	2-Dec-24	Day time	2	311				
		24132733 (6)-13	2-Dec-24	Night time	1	302	304	50	100	Pass
		24132733 (6)-14	2-Dec-24	Night time	2	306				
3	Area : Substation Building : 1st Floor : Switchyard Substation No.1 : โซนหน้าตู้ควบคุม	24132733 (6)-15	2-Dec-24	Day time	1	568	575	100	200	Pass
		24132733 (6)-16	2-Dec-24	Day time	2	577				
		24132733 (6)-17	2-Dec-24	Day time	3	580				
		24132733 (6)-18	2-Dec-24	Night time	1	375	376	100	200	Pass
		24132733 (6)-19	2-Dec-24	Night time	2	383				
		24132733 (6)-20	2-Dec-24	Night time	3	370				
4	Area : Substation Building : 1st Floor : Switchyard Substation No.2 : โซนหน้าตู้ควบคุม	24132733 (6)-21	2-Dec-24	Day time	1	403	411	100	200	Pass
		24132733 (6)-22	2-Dec-24	Day time	2	411				
		24132733 (6)-23	2-Dec-24	Day time	3	420				
		24132733 (6)-24	2-Dec-24	Night time	1	388	394	100	200	Pass
		24132733 (6)-25	2-Dec-24	Night time	2	396				
		24132733 (6)-26	2-Dec-24	Night time	3	399				
5	Area : Substation Building : 1st Floor : Switchyard Substation : Battery Room	24132733 (6)-27	2-Dec-24	Day time	1	320	320	50	100	Pass
		24132733 (6)-28	2-Dec-24	Day time	2	319				
		24132733 (6)-29	2-Dec-24	Night time	1	304	306	50	100	Pass
		24132733 (6)-30	2-Dec-24	Night time	2	308				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (7)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (7)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Water Treatment Plant Building : Lab Room : วัดวัด pH	24132733 (7)-1	2-Dec-24	Day time	1	986	-	400-500	-	Pass
		24132733 (7)-2	2-Dec-24	Night time	1	739	-	400-500	-	Pass
2	Area : Water Treatment Plant Building : Rest Room (lady)	24132733 (7)-3	2-Dec-24	Day time	1	266	262	50	100	Pass
		24132733 (7)-4	2-Dec-24	Day time	2	257				
		24132733 (7)-5	2-Dec-24	Night time	1	218	219	50	100	Pass
		24132733 (7)-6	2-Dec-24	Night time	2	220				
3	Area : Water Treatment Plant Building : Rest Room (Man)	24132733 (7)-7	2-Dec-24	Day time	1	242	240	50	100	Pass
		24132733 (7)-8	2-Dec-24	Day time	2	237				
		24132733 (7)-9	2-Dec-24	Night time	1	240	233	50	100	Pass
		24132733 (7)-10	2-Dec-24	Night time	2	226				
4	Area : Water Treatment Plant Building : Walkway : โซนหน้าห้อง Demin Control Room	24132733 (7)-11	2-Dec-24	Day time	1	2,360	1712	50	100	Pass
		24132733 (7)-12	2-Dec-24	Day time	2	2,120				
		24132733 (7)-13	2-Dec-24	Day time	3	656				
		24132733 (7)-14	2-Dec-24	Night time	1	566	550	50	100	Pass
		24132733 (7)-15	2-Dec-24	Night time	2	530				
		24132733 (7)-16	2-Dec-24	Night time	3	553				
5	Spot : Water Treatment Plant Building : โต๊ะ Chemist	24132733 (7)-17	2-Dec-24	Day time	1	465	-	400-500	-	Pass
		24132733 (7)-18	2-Dec-24	Night time	1	479	-	400-500	-	Pass
6	Area : Water Treatment Plant Building : LCR Demin Plant Room : โซนหน้าตู้ Control	24132733 (7)-19	2-Dec-24	Day time	1	510	527	100	200	Pass
		24132733 (7)-20	2-Dec-24	Day time	2	544				
		24132733 (7)-21	2-Dec-24	Night time	1	550	516	100	200	Pass
		24132733 (7)-22	2-Dec-24	Night time	2	481				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh
Section Head

Approved by

Wichan Choonharat
Assistant Manager

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Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (8)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (8)-1

Page 1 of 2

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Spot : Workshop and Warehouse Building : 2nd Floor : C&I Room	24132733 (8)-1	2-Dec-24	Day time	1	451	-	400-500	-	Pass
2	Spot : Workshop and Warehouse Building : 2nd Floor : Mechanical Room	24132733 (8)-2	2-Dec-24	Day time	1	404	-	400-500	-	Pass
3	Spot : Workshop and Warehouse Building : 2nd Floor : Electrical Room	24132733 (8)-3	2-Dec-24	Day time	1	402	-	400-500	-	Pass
4	Spot : Workshop and Warehouse Building : 2nd Floor : Maintenance Manager Room	24132733 (8)-4	2-Dec-24	Day time	1	521	-	400-500	-	Pass
5	Area : Workshop and Warehouse Building : 2nd Floor : Canteen Room & Pantry Room : โซนโต๊ะอาหาร	24132733 (8)-5	2-Dec-24	Day time	1	663	661	150	300	Pass
		24132733 (8)-6	2-Dec-24	Day time	2	659				
6	Spot : Workshop and Warehouse Building : 2nd Floor : Copy Machine Room	24132733 (8)-7	2-Dec-24	Day time	1	892	-	300-400	-	Pass
7	Area : Workshop and Warehouse Building : 2nd Floor : Maid Room	24132733 (8)-8	2-Dec-24	Day time	1	245	242	50	100	Pass
		24132733 (8)-9	2-Dec-24	Day time	2	240				
8	Area : Workshop and Warehouse Building : 2nd Floor : Meeting Room : โซนโต๊ะ ประชุม	24132733 (8)-10	2-Dec-24	Day time	1	428	443	150	300	Pass
		24132733 (8)-11	2-Dec-24	Day time	2	460				
		24132733 (8)-12	2-Dec-24	Day time	3	440				
9	Area : Workshop and Warehouse Building : 2nd Floor : Walkway No.1	24132733 (8)-13	2-Dec-24	Day time	1	222	246	50	100	Pass
		24132733 (8)-14	2-Dec-24	Day time	2	256				
		24132733 (8)-15	2-Dec-24	Day time	3	240				
		24132733 (8)-16	2-Dec-24	Day time	4	265				
10	Area : Workshop and Warehouse Building : 2nd Floor : Walkway No.2	24132733 (8)-17	2-Dec-24	Day time	1	618	592	50	100	Pass
		24132733 (8)-18	2-Dec-24	Day time	2	578				
		24132733 (8)-19	2-Dec-24	Day time	3	580				
		24132733 (8)-20	2-Dec-24	Day time	4	591				
11	Area : Workshop and Warehouse Building : 2nd Floor : Rest Room (Man)	24132733 (8)-21	2-Dec-24	Day time	1	240	252	50	100	Pass
		24132733 (8)-22	2-Dec-24	Day time	2	251				
		24132733 (8)-23	2-Dec-24	Day time	3	260				
		24132733 (8)-24	2-Dec-24	Day time	4	255				
12	Area : Workshop and Warehouse Building : 2nd Floor : Document Room 1-2	24132733 (8)-25	2-Dec-24	Day time	1	306	307	150	300	Pass
		24132733 (8)-26	2-Dec-24	Day time	2	308				

Technical Management

Supot Salamteh
Section Head

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Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (8)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (8)-1

Page 2 of 2

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
13	Spot : Workshop and Warehouse Building : 2nd Floor : IT Officer	24132733 (8)-27	2-Dec-24	Day time	1	642	-	400-500	-	Pass

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

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Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (9)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (9)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Area : Workshop and Warehouse Building : Ground Floor : LTSA Room : โซนหลัง	24132733 (9)-1	2-Dec-24	Day time	1	631	587	50	100	Pass
		24132733 (9)-2	2-Dec-24	Day time	2	590				
		24132733 (9)-3	2-Dec-24	Day time	3	558				
		24132733 (9)-4	2-Dec-24	Day time	4	570				
2	Area : Workshop and Warehouse Building : Ground Floor : Walkway No.1 : โซนหน้า Workshop	24132733 (9)-5	2-Dec-24	Day time	1	454	457	50	100	Pass
		24132733 (9)-6	2-Dec-24	Day time	2	460				
3	Area : Workshop and Warehouse Building : Ground Floor : Workshop : พื้นที่โซน ปฏิบัติการ	24132733 (9)-7	2-Dec-24	Day time	1	427	415	50	100	Pass
		24132733 (9)-8	2-Dec-24	Day time	2	408				
		24132733 (9)-9	2-Dec-24	Day time	3	411				
		24132733 (9)-10	2-Dec-24	Day time	4	415				
4	Area : Workshop and Warehouse Building : Ground Floor : Spare Room : โซนกลาง	24132733 (9)-11	2-Dec-24	Day time	1	203	214	50	100	Pass
		24132733 (9)-12	2-Dec-24	Day time	2	211				
		24132733 (9)-13	2-Dec-24	Day time	3	224				
		24132733 (9)-14	2-Dec-24	Day time	4	220				
5	Area : Workshop and Warehouse Building : Ground Floor : Tool Room	24132733 (9)-15	2-Dec-24	Day time	1	273	270	50	100	Pass
		24132733 (9)-16	2-Dec-24	Day time	2	266				
6	Spot : Workshop and Warehouse Building : Ground Floor : Warehouse Officer	24132733 (9)-17	2-Dec-24	Day time	1	544	-	400-500	-	Pass
7	Area : Workshop and Warehouse Building : Ground Floor : Rest Room (Man)	24132733 (9)-18	2-Dec-24	Day time	1	257	258	50	100	Pass
		24132733 (9)-19	2-Dec-24	Day time	2	263				
		24132733 (9)-20	2-Dec-24	Day time	3	255				
8	Area : Workshop and Warehouse Building : Ground Floor : Rest Room (lady)	24132733 (9)-21	2-Dec-24	Day time	1	244	233	50	100	Pass
		24132733 (9)-22	2-Dec-24	Day time	2	221				
		24132733 (9)-23	2-Dec-24	Day time	3	233				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh
Section Head

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Assistant Manager

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (10)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (10)-1

Page 1 of 1

GNLL

Lay out No.	Location	Reference Number	Date	Time	No.	Illuminance (Lux)		Guideline Limit		Comment
						Spot	Average	Spot/Min	Average	
1	Area : Electrical and Control Building : 2nd Floor : ทางเดินไฟฟ้า ชั้น 2 - ชั้นลอย	24132733 (10)-1	2-Dec-24	Night time	1	109	90	-	10	Pass
		24132733 (10)-2	2-Dec-24	Night time	2	108				
		24132733 (10)-3	2-Dec-24	Night time	3	111				
		24132733 (10)-4	2-Dec-24	Night time	4	50				
		24132733 (10)-5	2-Dec-24	Night time	5	55				
		24132733 (10)-6	2-Dec-24	Night time	6	52				
		24132733 (10)-7	2-Dec-24	Night time	7	85				
		24132733 (10)-8	2-Dec-24	Night time	8	80				
		24132733 (10)-9	2-Dec-24	Night time	9	90				
		24132733 (10)-10	2-Dec-24	Night time	10	92				
		24132733 (10)-11	2-Dec-24	Night time	11	90				
		24132733 (10)-12	2-Dec-24	Night time	12	105				
		24132733 (10)-13	2-Dec-24	Night time	13	109				
		24132733 (10)-14	2-Dec-24	Night time	14	110				
		24132733 (10)-15	2-Dec-24	Night time	15	107				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh
Section Head

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Assistant Manager

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339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O :

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location: GNLL

Lot ID: 24132733 (11)

Date Received : Dec 04, 2024

Date Reported : Dec 06, 2024

Report Number: 24132733 (11)-1

Page 1 of 1

Lay out No.	Location	Reference Number	GNLL		No.	Illuminance (Lux)		Guideline Limit		Comment
			Date	Time		Spot	Average	Spot/Min	Average	
1	Area : Electrical and Control Building : 1st Floor : ทางเดินหนีไฟ ชั้นลอย - ชั้น 1	24132733 (11)-1	2-Dec-24	Night time	1	82	67	-	10	Pass
		24132733 (11)-2	2-Dec-24	Night time	2	79				
		24132733 (11)-3	2-Dec-24	Night time	3	90				
		24132733 (11)-4	2-Dec-24	Night time	4	52				
		24132733 (11)-5	2-Dec-24	Night time	5	45				
		24132733 (11)-6	2-Dec-24	Night time	6	47				
		24132733 (11)-7	2-Dec-24	Night time	7	66				
		24132733 (11)-8	2-Dec-24	Night time	8	68				
		24132733 (11)-9	2-Dec-24	Night time	9	70				

Measurement by : Norranon Tathongkham

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot S.

Supot Salamteh
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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ภาคผนวก ค-8

ผลการตรวจวัดระดับเสียง (Leq 8 hrs)



Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132729

Date Received : Dec 03, 2024

Date Reported : Dec 10, 2024

Report Number: 3186670-1

Page 1 of 1

Sample Number 24132729-1
Parameter Noise (Leq 8 hrs.)
Location บริเวณ Gas Turbine&Generator 1
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:30 AM - 09:30 AM	80.4	81.0	80.3
09:30 AM - 10:30 AM	80.8	81.7	80.7
10:30 AM - 11:30 AM	80.8	82.4	80.7
11:30 AM - 12:30 PM	80.9	82.2	80.8
12:30 PM - 01:30 PM	80.7	81.2	80.6
01:30 PM - 02:30 PM	80.7	81.2	80.6
02:30 PM - 03:30 PM	80.4	80.8	80.2
03:30 PM - 04:30 PM	80.6	81.1	80.5

Leq Average 8 hrs. (dB(A))

80.7

Lmax (dB(A))

82.4

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย

ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๔๖

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

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339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132729

Date Received : Dec 03, 2024

Date Reported : Dec 10, 2024

Report Number: 3186671-1

Page 1 of 1

Sample Number 24132729-2
Parameter Noise (Leq 8 hrs.)
Location บริเวณ Gas Turbine&Generator 2
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:20 AM - 09:20 AM	80.7	81.3	80.6
09:20 AM - 10:20 AM	80.7	81.6	80.6
10:20 AM - 11:20 AM	80.6	82.2	80.5
11:20 AM - 12:20 PM	80.6	81.9	80.5
12:20 PM - 01:20 PM	80.5	81.0	80.4
01:20 PM - 02:20 PM	80.4	80.9	80.3
02:20 PM - 03:20 PM	80.6	81.0	80.4
03:20 PM - 04:20 PM	80.4	80.9	80.3

Leq Average 8 hrs. (dB(A))

80.6

Lmax (dB(A))

82.2

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๔๖

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132729

Date Received : Dec 03, 2024

Date Reported : Dec 10, 2024

Report Number: 3186672-1

Page 1 of 1

Sample Number 24132729-3
Parameter Noise (Leq 8 hrs.)
Location บริเวณ Steam Turbine & Generator (enclosure)
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:39 AM - 09:39 AM	82.8	83.4	82.7
09:39 AM - 10:39 AM	83.1	84.0	83.0
10:39 AM - 11:39 AM	83.2	84.8	83.1
11:39 AM - 12:39 PM	83.2	84.5	83.1
12:39 PM - 01:39 PM	82.6	83.1	82.5
01:39 PM - 02:39 PM	82.6	83.1	82.5
02:39 PM - 03:39 PM	83.2	83.6	83.0
03:39 PM - 04:39 PM	82.9	83.4	82.8

Leq Average 8 hrs. (dB(A))

83.0

Lmax (dB(A))

84.8

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย

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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132729

Date Received : Dec 03, 2024

Date Reported : Dec 10, 2024

Report Number: 3186673-1

Page 1 of 1

Sample Number 24132729-4
Parameter Noise (Leq 8 hrs.)
Location บริเวณ HRSG 1 feed water pump 1
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:19 AM - 09:19 AM	75.8	77.1	75.3
09:19 AM - 10:19 AM	75.2	76.7	74.8
10:19 AM - 11:19 AM	75.2	76.7	74.7
11:19 AM - 12:19 PM	75.2	76.5	74.8
12:19 PM - 01:19 PM	75.5	76.9	75.1
01:19 PM - 02:19 PM	75.5	76.8	75.1
02:19 PM - 03:19 PM	75.4	76.7	75.1
03:19 PM - 04:19 PM	75.6	76.9	75.2

Leq Average 8 hrs. (dB(A))

75.4

Lmax (dB(A))

77.1

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132729

Date Received : Dec 03, 2024

Date Reported : Dec 10, 2024

Report Number: 3186674-1

Page 1 of 1

Sample Number 24132729-5
Parameter Noise (Leq 8 hrs.)
Location บริเวณ HRSG 2 feed water pump 2
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:25 AM - 09:25 AM	76.1	77.5	75.6
09:25 AM - 10:25 AM	75.4	81.0	74.8
10:25 AM - 11:25 AM	75.5	77.4	74.8
11:25 AM - 12:25 PM	75.2	76.6	74.7
12:25 PM - 01:25 PM	76.1	78.9	75.3
01:25 PM - 02:25 PM	76.6	79.3	75.9
02:25 PM - 03:25 PM	76.3	80.5	75.8
03:25 PM - 04:25 PM	76.1	78.9	75.7

Leq Average 8 hrs. (dB(A))

75.9

Lmax (dB(A))

81.0

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
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Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand 21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132729

Date Received : Dec 03, 2024

Date Reported : Dec 10, 2024

Report Number: 3186675-1

Page 1 of 1

Sample Number 24132729-6
Parameter Noise (Leq 8 hrs.)
Location บริเวณ Cooling Tower (บริเวณ CWP)
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:35 AM - 09:35 AM	78.8	90.4	78.6
09:35 AM - 10:35 AM	78.7	79.7	78.5
10:35 AM - 11:35 AM	78.6	79.5	78.3
11:35 AM - 12:35 PM	78.5	79.3	78.3
12:35 PM - 01:35 PM	78.5	85.5	78.2
01:35 PM - 02:35 PM	78.5	79.3	78.3
02:35 PM - 03:35 PM	78.6	79.4	78.3
03:35 PM - 04:35 PM	78.9	79.8	78.6

Leq Average 8 hrs. (dB(A))

78.6

Lmax (dB(A))

90.4

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
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Analysis / Test Report

Client : Gulf JP NLL Co., Ltd.

339 Moo 3, Hemaraj Eastern Seaboard Industrial Estate, Nong Lalok, Ban Khai, Rayong Thailand
21120

P/O : 4107005051

Project Name : โรงไฟฟ้าหนองละลอก 1

Project Location : GNLL

Lot ID: 24132729

Date Received : Dec 03, 2024

Date Reported : Dec 10, 2024

Report Number: 3186676-1

Page 1 of 1

Sample Number 24132729-7
Parameter Noise (Leq 8 hrs.)
Location บริเวณหน่วยผลิตน้ำเย็น (Chiller plant)
Measurement Date Dec 02, 2024
Measurement by Norranon Tathongkham

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:09 AM - 10:09 AM	68.9	77.0	66.9
10:09 AM - 11:09 AM	68.9	77.4	66.9
11:09 AM - 12:09 PM	68.7	76.6	66.8
12:09 PM - 01:09 PM	68.9	76.9	66.8
01:09 PM - 02:09 PM	69.8	77.0	68.0
02:09 PM - 03:09 PM	69.9	77.3	68.0
03:09 PM - 04:09 PM	69.7	78.4	68.0
04:09 PM - 05:09 PM	69.8	77.1	68.0

Leq Average 8 hrs. (dB(A))

69.4

Lmax (dB(A))

78.4

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย

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