

ภาคผนวกที่ 3

ผลการวิเคราะห์คุณภาพสิ่งแวดล้อม

คุณภาพอากาศ



Ref. No. AR174(1)-AR174(7)/11/22

Report No. 2211/266

R-Pro-1010-4/2021

Ambient Air Quality Analysis Report

Project : Hyundai Engineering Company
Company : Hyundai Engineering Company
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling by : Thitinan Ruangram
S.P.S. Consulting Service Co., Ltd.

Sampling Date : 27 October-3 November 2022
Date Received : 4 November 2022
Date of Analysis : 4-15 November 2022
Date Reported : 17 November 2022

Parameter	Sampling Method	Analytical Method	Construction of Production Control Building Area							Standard
			October–November 2022							
			27–28	28–29	29–30	30–31	31–1	1–2	2–3	
Total Suspended Particulate (mg/m ³)	High Volume Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix B)	0.067	0.057	0.085	0.103	0.108	0.091	0.102	Less than 0.33
PM ₁₀ (mg/m ³)	High Volume PM ₁₀ Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix J)	0.029	0.023	0.037	0.064	0.068	0.048	0.091	Less than 0.12

Standard = Ambient Air Quality Standards, Notification of the National Environment Board No. 24, B.E. 2547

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.

(Natchakamon Meerahan)

Laboratory Operator

17 / 11 / 22

(Phenpha Viphashtawat)

Laboratory Supervisor

17 / 11 / 22



Ref. No. AR518(1)-AR518(7)/11/22

Report No. 2211/574

R-Pro-1010-4/2021

Ambient Air Quality Analysis Report

Project : Ultra Clean Fule (UCF) Diesel Euro V
Company : Hyundai Engineering Company
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling by : Thitinan Ruangram
S.P.S. Consulting Service Co., Ltd.

Sampling Date : 14-21 November 2022
Date Received : 22 November 2022
Date of Analysis : 22 November-1 December 2022
Date Reported : 7 December 2022

Parameter	Sampling Method	Analytical Method	Cooling Tower Area							Standard
			November 2022							
			14-15	15-16	16-17	17-18	18-19	19-20	20-21	
Total Suspended Particulate (mg/m ³)	High Volume Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix B)	0.075	0.048	0.058	0.046	0.050	0.041	0.033	Less than 0.33
PM ₁₀ (mg/m ³)	High Volume PM ₁₀ Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix J)	0.033	0.020	0.025	0.019	0.022	0.017	0.019	Less than 0.12

Remark:

Standard = Ambient Air Quality Standards, Notification of the National Environment Board No. 24, B.E. 2547

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.

(Natchakamon Meerahan)

Laboratory Operator

7 / 12 / 22

Laboratory Supervisor

7 / 12 / 22



Ref. No. AR175(1)-AR175(7)/11/22

Report No. 2211/265

R-Pro-1010-4/2021

Ambient Air Quality Analysis Report

Project : Hyundai Engineering Company
Company : Hyundai Engineering Company
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling by : Thitinan Ruangram
S.P.S. Consulting Service Co., Ltd.

Sampling Date : 27 October-3 November 2022
Date Received : 4 November 2022
Date of Analysis : 4-15 November 2022
Date Reported : 17 November 2022

Parameter	Sampling Method	Analytical Method	Dissel Hydrotreating Unit (DHT Area)							Standard
			October–November 2022							
			27–28	28–29	29–30	30–31	31–1	1–2	2–3	
Total Suspended Particulate (mg/m ³)	High Volume Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix B)	0.057	0.066	0.081	0.083	0.089	0.079	0.088	Less than 0.33
PM ₁₀ (mg/m ³)	High Volume PM ₁₀ Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix J)	0.024	0.029	0.034	0.035	0.046	0.033	0.046	Less than 0.12

Remark:

Standard = Ambient Air Quality Standards, Notification of the National Environment Board No. 24, B.E. 2547

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.

(Natchakamon Meerahan)

Laboratory Operator

17 / 11 / 22

Laboratory Supervisor

17 / 11 / 22



Ref. No. AR519(1)-AR519(7)/11/22

Report No. 2211/573

R-Pro-1010-4/2021

Ambient Air Quality Analysis Report

Project : Ultra Clean Fule (UCF) Diesel Euro V
Company : Hyundai Engineering Company
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling by : Thitinan Ruangram
S.P.S. Consulting Service Co., Ltd.

Sampling Date : 14-21 November 2022
Date Received : 22 November 2022
Date of Analysis : 22 November-1 December 2022
Date Reported : 7 December 2022

Parameter	Sampling Method	Analytical Method	EGF Area							0.000
			November 2022							
			14-15	15-16	16-17	17-18	18-19	19-20	20-21	
Total Suspended Particulate (mg/m ³)	High Volume Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix B)	0.025	0.039	0.048	0.039	0.053	0.056	0.043	Less than 0.33
PM ₁₀ (mg/m ³)	High Volume PM ₁₀ Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix J)	0.014	0.017	0.026	0.017	0.023	0.028	0.019	Less than 0.12

Remark:

Standard = Ambient Air Quality Standards, Notification of the National Environment Board No. 24, B.E. 2547

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.

(Natchakamon Meerahan)

Laboratory Operator

7 / 12 / 22

(Phenpha Vipasthawatt)

Laboratory Supervisor

7 / 12 / 22



Ref. No. AR285(1)-AR285(7)/09/22

Report No. 2209/372

R-Pro-1010-4/2021

Ambient Air Quality Analysis Report

Project : Ultra Clean Fule (UCF) Diesel Euro V
Company : Hyundai Engineering Company
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling by : Mr.Titinan Ruengram
S.P.S. Consulting Service Co., Ltd.

Sampling Date : 8-15 September 2022
Date Received : 19 September 2022
Date of Analysis : 19-27 September 2022
Date Reported : 29 September 2022

Parameter	Sampling Method	Analytical Method	WWT 4 Area							Standard
			September 2022							
			8-9	9-10	10-11	11-12	12-13	13-14	14-15	
Total Suspended Particulate (mg/m ³)	High Volume Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix B)	0.028	0.029	0.038	0.042	0.029	0.020	0.037	Less than 0.33
PM ₁₀ (mg/m ³)	High Volume PM ₁₀ Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix J)	0.011	0.012	0.016	0.018	0.012	0.014	0.016	Less than 0.12

Remark:

Standard = Ambient Air Quality Standards, Notification of the National Environment Board No. 24, B.E. 2547

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.

(Natchakamon Meerahan)

Laboratory Operator

29 / 09 / 22

(Phenpha Viphashtawat)

Laboratory Supervisor

29 / 09 / 22



Ref. No. AR347(1)-AR347(7)/09/22

Report No. 2209/447

R-Pro-1091-2/2021

Ambient Air Quality Analysis Report

Project : HMU-2
Company : Wison Engineering Ltd.
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Wison Engineering Ltd.
Sampling by : Mr.Atsadawut Nirapai
S.P.S. Consulting Service Co., Ltd.

Sampling Date : 14-21 September 2022
Date Received : 22 September 2022
Date of Analysis : 22 September-3 October 2022
Date Reported : 5 October 2022

Parameter	Sampling Method	Analytical Method	HMU Area							Standard
			September 2022							
			14-15	15-16	16-17	17-18	18-19	19-20	20-21	
Total Suspended Particulate (mg/m ³)	High Volume Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix B)	0.020	0.021	0.036	0.034	0.050	0.046	0.054	Less than 0.33
PM ₁₀ (mg/m ³)	High Volume PM ₁₀ Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix J)	0.011	0.013	0.027	0.012	0.022	0.019	0.027	Less than 0.12

Remark:

Standard = Ambient Air Quality Standards, Notification of the National Environment Board No. 24, B.E. 2547

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.

(Natchakamon Meerahan)

Laboratory Operator

5 / 10 / 22

(Phenpha Viphasathawat)

Laboratory Supervisor

5 / 10 / 22

ความเร็วและทิศทางลม



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72 Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

1/3

RY0169/10/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Wind Speed Wind Direction	Construction of a Production Control Building Area				
	Percent of Wind Speed (%)				
	Light Air 1-5 km/hr	Light Breeze 6-11 km/hr	Gentle Breeze 12-19 km/hr	Moderate Breeze 20-28 km/hr	Fresh Breeze 29-38 km/hr
N (349°-11°)	28.571	5.357	-	-	-
NNE (11°-34°)	16.075	7.143	-	-	-
NE (34°-56°)	13.690	4.762	-	-	-
ENE (56°-79°)	-	-	-	-	-
E (79°-102°)	6.548	1.190	-	-	-
ESE (102°-124°)	1.190	-	-	-	-
SE (124°-146°)	1.190	-	-	-	-
SSE (146°-169°)	5.357	2.976	-	-	-
S (169°-191°)	2.976	-	-	-	-
SSW (191°-214°)	1.190	-	-	-	-
SW (214°-236°)	-	-	-	-	-
WSW (236°-259°)	-	-	-	-	-
W (259°-281°)	0.595	-	-	-	-
WNW (281°-304°)	-	-	-	-	-
NW (304°-326°)	-	-	-	-	-
NNW (326°-349°)	1.190	-	-	-	-
Total	78.572	21.428	0.000	0.000	0.000
Calm (<1 km/hr)	0.000				

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

[Redacted Signature]

(Tinarom Khruawan)

Scientist

07 / 11 / 22

[Redacted Signature]

(Khemmarin Thirarattaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72 Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

2/3

RY0169/10/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Construction of a Production Control Building Area							
	October-November 2022							
	27-28		28-29		29-30		30-31	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
11:00-12:00	1.6	NE	1.6	NNE	6.4	SSE	4.8	SE
12:00-13:00	4.8	ESE	1.6	N	4.8	SSE	6.4	SSE
13:00-14:00	1.6	ESE	3.2	E	6.4	SSE	8.0	NE
14:00-15:00	1.6	N	4.8	E	3.2	N	3.2	NE
15:00-16:00	4.8	N	1.6	E	1.6	N	4.8	E
16:00-17:00	3.2	N	4.8	NNE	8.0	NNE	3.2	E
17:00-18:00	4.8	NE	8.0	NNE	3.2	NNE	6.4	NE
18:00-19:00	6.4	NE	6.4	E	4.8	NE	8.0	NNE
19:00-20:00	8.0	NE	8.0	N	3.2	NNE	6.4	NNE
20:00-21:00	3.2	NE	1.6	N	4.8	NE	3.2	NE
21:00-22:00	3.2	N	1.6	N	6.4	NNE	4.8	NE
22:00-23:00	1.6	E	6.4	N	11.3	NE	1.6	NNE
23:00-00:00	4.8	E	4.8	NE	3.2	NNE	1.6	NE
00:00-01:00	3.2	E	1.6	N	4.8	NNE	6.4	NNE
01:00-02:00	4.8	N	1.6	N	3.2	NNE	8.0	NNE
02:00-03:00	8.0	N	3.2	N	6.4	NNE	11.3	NNE
03:00-04:00	3.2	NE	1.6	N	1.6	NNE	4.8	N
04:00-05:00	6.4	NE	3.2	N	3.2	N	6.4	N
05:00-06:00	1.6	NE	3.2	NNE	3.2	NNE	4.8	N
06:00-07:00	3.2	NNE	1.6	NNE	1.6	N	3.2	N
07:00-08:00	1.6	NNE	1.6	N	1.6	SSW	3.2	NNE
08:00-09:00	3.2	N	6.4	N	4.8	S	4.8	N
09:00-10:00	1.6	N	1.6	N	1.6	S	3.2	N
10:00-11:00	4.8	NE	1.6	N	1.6	SSE	3.2	N
Temperature Average (°C)	31.5		31.4		31.0		29.7	
Barometric Pressure Average (mmHg)	756.82		756.90		757.02		757.26	
Sky Condition	Fair		Fair		Fair		Fair	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarattaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

3/3

RY0169/10/65


R-Pro-1010-4/2021

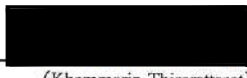
Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Construction of a Production Control Building Area					
	October-November 2022					
	31-1		1-2		2-3	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
11:00-12:00	6.4	NNE	3.2	SSE	3.2	S
12:00-13:00	1.6	N	4.8	SE	1.6	SSE
13:00-14:00	1.6	N	3.2	NE	1.6	SSE
14:00-15:00	3.2	NNW	1.6	NNE	3.2	E
15:00-16:00	3.2	NNW	1.6	NNE	3.2	SSE
16:00-17:00	4.8	NE	3.2	NNE	4.8	SSE
17:00-18:00	6.4	N	1.6	NE	4.8	E
18:00-19:00	8.0	N	4.8	NNE	3.2	NE
19:00-20:00	3.2	N	8.0	NNE	6.4	NE
20:00-21:00	4.8	NE	6.4	NNE	8.0	NE
21:00-22:00	8.0	N	4.8	NNE	4.8	E
22:00-23:00	3.2	N	3.2	NE	1.6	SSE
23:00-00:00	1.6	NE	4.8	NE	3.2	SSE
00:00-01:00	3.2	N	1.6	NE	11.3	SSE
01:00-02:00	4.8	N	1.6	NNE	4.8	NE
02:00-03:00	1.6	N	3.2	NNE	8.0	E
03:00-04:00	3.2	N	4.8	NNE	6.4	SSE
04:00-05:00	3.2	NNE	3.2	N	3.2	N
05:00-06:00	4.8	N	4.8	N	3.2	N
06:00-07:00	3.2	NNE	3.2	N	8.0	N
07:00-08:00	3.2	N	4.8	N	3.2	N
08:00-09:00	1.6	NNE	3.2	N	3.2	W
09:00-10:00	3.2	N	3.2	N	1.6	S
10:00-11:00	1.6	NNE	1.6	S	1.6	SSW
Temperature Average (°C)	30.5		31.7		31.9	
Barometric Pressure Average (mmHg)	757.13		756.72		756.67	
Sky Condition	Fair		Fair		Fair	

Reported results refer to measurement time only.
Do not copy partial of this measurement report without official approval.


Scientist
07 / 11 / 22


(Khemmarin Thirarattaset)
Technical Supervisor
07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

1/3

RY0274/11/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Sampling Date : 14-21 November 2022
Date Reported : 24 November 2022

Wind Speed Wind Direction	Cooling Tower Area				
	Percent of Wind Speed (%)				
	Light Air 1-5 km/hr	Light Breeze 6-11 km/hr	Gentle Breeze 12-19 km/hr	Moderate Breeze 20-28 km/hr	Fresh Breeze 29-38 km/hr
N (349°-11°)	-	4.167	0.595	-	-
NNE (11°-34°)	3.575	7.738	0.595	-	-
NE (34°-56°)	11.905	6.548	-	-	-
ENE (56°-79°)	2.381	1.190	-	-	-
E (79°-102°)	1.190	-	-	-	-
ESE (102°-124°)	-	0.595	-	-	-
SE (124°-146°)	1.190	2.381	0.595	-	-
SSE (146°-169°)	-	-	-	-	-
S (169°-191°)	-	-	-	-	-
SSW (191°-214°)	0.595	1.786	-	-	-
SW (214°-236°)	2.381	1.786	-	-	-
WSW (236°-259°)	1.190	5.357	1.190	-	-
W (259°-281°)	1.190	2.381	-	-	-
WNW (281°-304°)	7.143	1.190	-	-	-
NW (304°-326°)	13.095	5.952	-	-	-
NNW (326°-349°)	7.143	2.976	-	-	-
Total	52.978	44.047	2.975	0.000	0.000
Calm (<1 km/hr)	0.000				

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

2/3

RY0274/11/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area							
	November 2022							
	14-15		15-16		16-17		17-18	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
12:00-13:00	9.7	NE	8.0	WSW	3.2	NE	1.6	NE
13:00-14:00	9.7	ESE	9.7	SW	4.8	SE	4.8	WSW
14:00-15:00	11.3	SE	11.3	SE	4.8	SE	12.9	WSW
15:00-16:00	12.9	SE	9.7	SE	8.0	SE	14.5	WSW
16:00-17:00	11.3	SSW	4.8	SW	8.0	SSW	8.0	WSW
17:00-18:00	9.7	SSW	8.0	WSW	4.8	SSW	6.4	W
18:00-19:00	1.6	SW	8.0	WSW	1.6	WSW	4.8	WNW
19:00-20:00	1.6	SW	6.4	WNW	1.6	NW	3.2	NW
20:00-21:00	4.8	W	6.4	WSW	1.6	NNW	4.8	WNW
21:00-22:00	4.8	NW	6.4	W	1.6	NNW	1.6	WNW
22:00-23:00	4.8	NW	4.8	WNW	1.6	NNW	1.6	NNE
23:00-00:00	6.4	NE	3.2	NW	3.2	WNW	3.2	NNW
00:00-01:00	6.4	NE	3.2	NW	3.2	WNW	3.2	NW
01:00-02:00	6.4	NNE	4.8	NW	3.2	NNW	3.2	NW
02:00-03:00	3.2	NNE	4.8	WNW	3.2	NNW	3.2	NW
03:00-04:00	3.2	NE	4.8	WNW	4.8	NNW	3.2	NNE
04:00-05:00	3.2	NE	6.4	NW	4.8	W	4.8	NNE
05:00-06:00	3.2	NE	6.4	NW	8.0	W	4.8	NE
06:00-07:00	4.8	ENE	6.4	NW	8.0	NW	9.7	NE
07:00-08:00	4.8	ENE	6.4	NNW	8.0	NW	9.7	NE
08:00-09:00	9.7	NNE	3.2	NNW	6.4	N	9.7	NNE
09:00-10:00	9.7	NNE	3.2	NE	6.4	N	11.3	NE
10:00-11:00	9.7	NW	3.2	NE	3.2	NE	11.3	NE
11:00-12:00	8.0	WSW	3.2	NE	3.2	NE	11.3	NW
Temperature Average (°C)	28.0		28.8		27.6		28.5	
Barometric Pressure Average (mmHg)	756.32		756.58		756.25		756.20	
Sky Condition	Clody and Rainy		Fair		Fair		Clody and Rainy	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72 Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

3/3

RY0274/11/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area					
	November 2022					
	18-19		19-20		20-21	
	WS (km/hr)	WD	WS (km/hr)	WD	Fair	WD
12:00-13:00	6.4	NE	1.6	NW	4.8	NE
13:00-14:00	6.4	NE	1.6	NW	1.6	NE
14:00-15:00	6.4	NW	1.6	NW	1.6	WNW
15:00-16:00	8.0	NW	4.8	SW	3.2	WNW
16:00-17:00	8.0	W	9.7	SW	1.6	NW
17:00-18:00	8.0	WSW	9.7	SW	1.6	NNW
18:00-19:00	6.4	WSW	8.0	WSW	1.6	NW
19:00-20:00	3.2	NW	4.8	WNW	3.2	NW
20:00-21:00	3.2	NW	4.8	WNW	3.2	NE
21:00-22:00	6.4	N	8.0	N	1.6	E
22:00-23:00	6.4	N	8.0	ENE	1.6	E
23:00-00:00	6.4	NE	9.7	ENE	1.6	ENE
00:00-01:00	3.2	NE	9.7	NE	1.6	ENE
01:00-02:00	3.2	NE	9.7	N	6.4	NNE
02:00-03:00	4.8	NNW	11.3	N	6.4	NNE
03:00-04:00	4.8	NNW	12.9	N	6.4	NNW
04:00-05:00	8.0	NNW	12.9	NNE	4.8	NW
05:00-06:00	8.0	NNW	11.3	NNE	4.8	NW
06:00-07:00	8.0	NNW	11.3	NNE	9.7	NNE
07:00-08:00	9.7	NNE	9.7	WNW	9.7	NNE
08:00-09:00	3.2	NNE	9.7	NW	4.8	NE
09:00-10:00	3.2	NE	8.0	NNE	3.2	NW
10:00-11:00	3.2	NE	8.0	NNE	3.2	NNW
11:00-12:00	1.6	NNE	4.8	NE	1.6	NW
Temperature Average (°C)	28.6		30.0		27.3	
Barometric Pressure Average (mmHg)	756.30		756.25		756.12	
Sky Condition	Clody and Rainy		Fair		Clody and Rainy	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

1/3

RY0167/10/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October – 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Wind Speed Wind Direction	Diesel Hydrotreating Unit Area				
	Percent of Wind Speed (%)				
	Light Air 1-5 km/hr	Light Breeze 6-11 km/hr	Gentle Breeze 12-19 km/hr	Moderate Breeze 20-28 km/hr	Fresh Breeze 29-38 km/hr
N (349°-11°)	7.143	6.548	-	-	-
NNE (11°-34°)	4.167	0.595	-	-	-
NE (34°-56°)	10.714	1.190	-	-	-
ENE (56°-79°)	2.381	-	-	-	-
E (79°-102°)	4.762	-	-	-	-
ESE (102°-124°)	2.381	-	-	-	-
SE (124°-146°)	2.381	1.190	-	-	-
SSE (146°-169°)	3.571	0.595	-	-	-
S (169°-191°)	3.571	-	-	-	-
SSW (191°-214°)	-	-	-	-	-
SW (214°-236°)	1.786	-	-	-	-
WSW (236°-259°)	-	2.976	-	-	-
W (259°-281°)	-	0.595	-	-	-
WNW (281°-304°)	1.190	-	-	-	-
NW (304°-326°)	17.857	6.548	-	-	-
NNW (326°-349°)	9.526	8.333	-	-	-
Total	71.430	28.570	0.000	0.000	0.000
Calm (<1 km/hr)	0.000				

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscon.com, www.spscon.com

2/3

RY0167/10/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 17 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area							
	October - November 2022							
	27-28		28-29		29-30		30-31	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
15:00-16:00	1.6	SSE	3.2	NW	1.6	N	3.2	S
16:00-17:00	1.6	SSE	3.2	NW	1.6	N	3.2	S
17:00-18:00	1.6	SSE	1.6	NW	3.2	N	4.8	S
18:00-19:00	3.2	SSE	1.6	NW	3.2	NNW	4.8	SW
19:00-20:00	3.2	SE	3.2	NNW	3.2	NNW	6.4	WSW
20:00-21:00	3.2	SE	3.2	NNW	1.6	NNW	6.4	WSW
21:00-22:00	3.2	S	4.8	NNW	1.6	NW	6.4	WSW
22:00-23:00	4.8	S	4.8	NNW	1.6	NW	8.0	WSW
23:00-00:00	4.8	S	4.8	NNW	4.8	NW	8.0	WSW
00:00-01:00	3.2	SSE	6.4	N	4.8	NW	9.7	W
01:00-02:00	3.2	SSE	6.4	N	4.8	N	9.7	NW
02:00-03:00	6.4	SSE	6.4	N	6.4	N	11.3	NW
03:00-04:00	6.4	SE	9.7	N	6.4	N	9.7	NNW
04:00-05:00	6.4	SE	9.7	NW	9.7	NW	9.7	NNW
05:00-06:00	4.8	SE	9.7	NW	9.7	NW	8.0	NW
06:00-07:00	4.8	SE	4.8	NW	8.0	NW	6.4	NW
07:00-08:00	4.8	ESE	3.2	NE	6.4	NNW	4.8	NW
08:00-09:00	3.2	ESE	3.2	NE	6.4	NNW	1.6	NW
09:00-10:00	1.6	E	1.6	NE	3.2	NNW	3.2	NNE
10:00-11:00	1.6	E	1.6	NW	3.2	NE	3.2	NNE
11:00-12:00	3.2	NE	1.6	NW	1.6	NE	4.8	NNE
12:00-13:00	3.2	NE	3.2	NW	1.6	NW	4.8	WNW
13:00-14:00	1.6	NW	1.6	NNE	1.6	SW	3.2	WNW
14:00-15:00	1.6	NW	1.6	NNE	1.6	SW	3.2	ENE
Temperature Average (°C)	28.6		27.4		28.7		28.6	
Barometric Pressure Average (mmHg)	755.12		755.00		754.82		755.16	
Sky Condition	Fair		Cloudy and Rainy		Fair		Fair	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72 Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

3/3

RY0167/10/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area					
	October - November 2022					
	31-01		01-02		02-03	
	WS (km/hr)	WD	WS (km/hr)	WD	Fair	WD
15:00-16:00	4.8	ENE	3.2	NW	1.6	NE
16:00-17:00	3.2	ENE	1.6	NW	1.6	ESE
17:00-18:00	1.6	NNW	1.6	NW	1.6	ESE
18:00-19:00	1.6	NNW	1.6	ENE	1.6	E
19:00-20:00	1.6	NNE	3.2	E	3.2	E
20:00-21:00	1.6	N	3.2	E	3.2	N
21:00-22:00	3.2	N	3.2	NE	4.8	N
22:00-23:00	3.2	N	3.2	NE	4.8	N
23:00-00:00	4.8	NNW	4.8	N	4.8	NNE
00:00-01:00	4.8	NW	4.8	N	8.0	NNE
01:00-02:00	4.8	NW	8.0	N	8.0	NE
02:00-03:00	4.8	NW	8.0	N	8.0	NE
03:00-04:00	9.7	NW	9.7	NNW	6.4	N
04:00-05:00	9.7	NNW	9.7	NNW	6.4	N
05:00-06:00	8.0	NNW	9.7	NNW	6.4	N
06:00-07:00	8.0	NNW	6.4	NNW	6.4	NNW
07:00-08:00	6.4	NNW	6.4	NNW	3.2	NNW
08:00-09:00	6.4	NW	1.6	NNW	3.2	NNW
09:00-10:00	4.8	NW	1.6	NW	3.2	NNW
10:00-11:00	4.8	NE	3.2	NW	1.6	NW
11:00-12:00	3.2	NE	3.2	NE	1.6	NE
12:00-13:00	3.2	NE	3.2	NE	1.6	NE
13:00-14:00	3.2	NW	3.2	NE	1.6	E
14:00-15:00	3.2	NW	3.2	NW	3.2	E
Temperature Average (°C)	28.4		27.4		26.8	
Barometric Pressure Average (mmHg)	755.83		756.03		755.72	
Sky Condition	Fair		Fair		Fair	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72 Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

1/3

RY0275/11/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 25 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Wind Speed Wind Direction	Enclose Ground Flare Area				
	Percent of Wind Speed (%)				
	Light Air 1-5 km/hr	Light Breeze 6-11 km/hr	Gentle Breeze 12-19 km/hr	Moderate Breeze 20-28 km/hr	Fresh Breeze 29-38 km/hr
N (349°-11°)	25.595	0.595	-	-	-
NNE (11°-34°)	0.595	-	-	-	-
NE (34°-56°)	4.167	2.381	-	-	-
ENE (56°-79°)	2.381	-	-	-	-
E (79°-102°)	1.190	-	-	-	-
ESE (102°-124°)	1.190	-	-	-	-
SE (124°-146°)	1.190	-	-	-	-
SSE (146°-169°)	2.381	-	-	-	-
S (169°-191°)	10.119	1.190	-	-	-
SSW (191°-214°)	1.786	0.595	-	-	-
SW (214°-236°)	1.190	-	-	-	-
WSW (236°-259°)	10.119	-	-	-	-
W (259°-281°)	7.143	1.190	-	-	-
WNW (281°-304°)	6.548	-	-	-	-
NW (304°-326°)	14.288	-	-	-	-
NNW (326°-349°)	4.167	-	-	-	-
Total	94.049	5.951	0.000	0.000	0.000
Calm (<1 km/hr)	0.000				

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Pharom Khruaewat)

Scientist

25 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

25 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

2/3

RY0275/11/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 25 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Enclose Ground Flare Area							
	November 2022							
	14-15		15-16		16-17		17-18	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
15:00-16:00	1.6	N	3.2	N	1.6	N	1.6	N
16:00-17:00	3.2	NNW	3.2	NW	3.2	N	3.2	N
17:00-18:00	3.2	NNW	4.8	NNW	4.8	N	3.2	NW
18:00-19:00	1.6	N	3.2	N	3.2	NW	4.8	NW
19:00-20:00	1.6	N	3.2	NW	4.8	N	1.6	NW
20:00-21:00	3.2	N	1.6	WNW	3.2	NW	1.6	W
21:00-22:00	1.6	NW	1.6	WSW	1.6	N	3.2	WNW
22:00-23:00	1.6	NW	3.2	WSW	1.6	NE	1.6	N
23:00-00:00	3.2	NW	1.6	WSW	4.8	NE	1.6	WSW
00:00-01:00	3.2	N	3.2	NNW	3.2	N	3.2	NW
01:00-02:00	1.6	N	1.6	N	1.6	N	1.6	WNW
02:00-03:00	3.2	N	1.6	N	3.2	N	1.6	N
03:00-04:00	1.6	WSW	3.2	N	6.4	NE	4.8	N
04:00-05:00	3.2	WSW	1.6	W	6.4	NE	6.4	W
05:00-06:00	3.2	WSW	3.2	W	3.2	NE	3.2	W
06:00-07:00	1.6	S	1.6	SSE	6.4	N	3.2	WNW
07:00-08:00	6.4	S	4.8	S	4.8	ESE	1.6	S
08:00-09:00	4.8	W	4.8	WSW	4.8	ESE	1.6	SSW
09:00-10:00	1.6	W	1.6	S	3.2	S	1.6	W
10:00-11:00	1.6	S	1.6	S	3.2	S	3.2	W
11:00-12:00	3.2	S	3.2	SSE	1.6	SE	3.2	SSW
12:00-13:00	3.2	WSW	1.6	W	1.6	SE	4.8	NW
13:00-14:00	1.6	S	3.2	WNW	3.2	S	1.6	N
14:00-15:00	1.6	NW	1.6	N	1.6	E	4.8	N
Temperature Average (°C)	27.3		28.3		28.1		28.6	
Barometric Pressure Average (mmHg)	756.13		756.68		756.19		756.88	
Sky Condition	Fair		Fair		Fair		Fair	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

[Redacted Signature]
(Phanorn Khruaewat)

Scientist

25 / 11 / 22

[Redacted Signature]
(Khemmarin Thirarathaset)

Technical Supervisor

25 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscon.com., www.spscon.com

3/3

RY0275/11/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 25 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Enclose Ground Flare Area					
	November 2022					
	18-19		19-20		20-21	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
15:00-16:00	4.8	N	S	3.2	W	1.6
16:00-17:00	3.2	WNW	S	3.2	W	3.2
17:00-18:00	3.2	NNE	SE	1.6	SSW	3.2
18:00-19:00	1.6	WNW	SE	1.6	NW	4.8
19:00-20:00	3.2	NW	S	3.2	N	1.6
20:00-21:00	3.2	NW	E	1.6	N	4.8
21:00-22:00	1.6	NE	N	1.6	N	4.8
22:00-23:00	1.6	NW	N	3.2	WNW	3.2
23:00-00:00	3.2	NE	NW	3.2	NNE	3.2
00:00-01:00	1.6	E	NW	4.8	WNW	1.6
01:00-02:00	3.2	NNW	NW	1.6	NW	3.2
02:00-03:00	1.6	WNW	W	1.6	NW	3.2
03:00-04:00	1.6	NW	WNW	3.2	NE	1.6
04:00-05:00	3.2	N	N	1.6	NW	1.6
05:00-06:00	6.4	NE	WSW	1.6	NE	3.2
06:00-07:00	6.4	NE	NW	3.2	E	1.6
07:00-08:00	4.8	NE	WNW	1.6	NNW	3.2
08:00-09:00	4.8	NE	N	1.6	WNW	1.6
09:00-10:00	NE	6.4	N	4.8	NW	1.6
10:00-11:00	NE	6.4	W	6.4	N	3.2
11:00-12:00	NE	3.2	W	3.2	NE	6.4
12:00-13:00	N	6.4	WNW	3.2	NE	6.4
13:00-14:00	ESE	4.8	S	1.6	NE	4.8
14:00-15:00	ESE	4.8	SSW	1.6	NE	4.8
Temperature Average (°C)	29.1		29.6		27.4	
Barometric Pressure Average (mmHg)	756.80		756.21		756.99	
Sky Condition	Fair		Fair		Fair	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

25 / 11 / 22

(Khemmarin Thiraratthaset)

Technical Supervisor

25 / 11 / 22



RY0071/09/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 8-15 September 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 September 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Wind Speed Wind Direction	WWT4				
	Percent of Wind Speed (%)				
	Light Air	Light Breeze	Gentle Breeze	Moderate Breeze	Fresh Breeze
	1-5 km/hr	6-11 km/hr	12-19 km/hr	20-28 km/hr	29-38 km/hr
N (349°-11°)	-	-	-	-	-
NNE (11°-34°)	-	-	-	-	-
NE (34°-56°)	-	-	-	-	-
ENE (56°-79°)	-	-	-	-	-
E (79°-102°)	-	-	-	-	-
ESE (102°-124°)	-	-	-	-	-
SE (124°-146°)	-	-	-	-	-
SSE (146°-169°)	4.762	-	-	-	-
S (169°-191°)	32.143	1.190	-	-	-
SSW (191°-214°)	11.905	0.595	-	-	-
SW (214°-236°)	6.548	7.738	-	-	-
WSW (236°-259°)	2.381	-	-	-	-
W (259°-281°)	4.167	-	-	-	-
WNW (281°-304°)	7.143	-	-	-	-
NW (304°-326°)	14.881	1.190	-	-	-
NNW (326°-349°)	4.762	0.595	-	-	-
Total	88.692	11.308	0.000	0.000	0.000
Calm (<1 km/hr)	0.000				

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Darn Thongsri)

Scientist

20/09/22

(Thunyaphat Lansettha)

Technical Supervisor

20/09/22



RY0071/09/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Sampling Date : 8-15 September 2022
Date Reported : 20 September 2022

Time	WWT4							
	September 2022							
	8-9		9-10		10-11		11-12	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
16:00-17:00	1.6	S	4.8	SSW	3.2	S	1.6	S
17:00-18:00	1.6	S	3.2	SSW	3.2	S	1.6	S
18:00-19:00	1.6	S	6.4	SW	1.6	S	1.6	S
19:00-20:00	3.2	SW	8.0	SW	1.6	SSE	1.6	SSE
20:00-21:00	3.2	SSW	3.2	SSW	1.6	SSE	3.2	SSE
21:00-22:00	3.2	SSW	4.8	SSW	3.2	SW	3.2	SSE
22:00-23:00	3.2	WNW	9.7	SW	3.2	WNW	3.2	SSW
23:00-00:00	8.0	NW	9.7	SW	1.6	WNW	3.2	SSW
00:00-01:00	3.2	NW	4.8	SW	1.6	NW	4.8	SSW
01:00-02:00	4.8	NW	3.2	SW	3.2	W	6.4	SW
02:00-03:00	3.2	NW	3.2	S	3.2	W	3.2	SW
03:00-04:00	3.2	NNW	3.2	S	4.8	W	3.2	SW
04:00-05:00	4.8	WNW	3.2	NNW	8.0	NNW	4.8	S
05:00-06:00	4.8	WNW	1.6	NNW	3.2	NNW	4.8	S
06:00-07:00	3.2	WSW	4.8	NW	1.6	NNW	6.4	S
07:00-08:00	1.6	NNW	4.8	NW	3.2	NW	6.4	SW
08:00-09:00	1.6	W	3.2	NW	3.2	NW	4.8	SSW
09:00-10:00	3.2	W	4.8	NW	3.2	NW	3.2	SSW
10:00-11:00	3.2	W	1.6	S	4.8	NW	1.6	SSW
11:00-12:00	1.6	SW	1.6	S	1.6	NW	1.6	SW
12:00-13:00	1.6	SW	1.6	S	3.2	S	3.2	SW
13:00-14:00	3.2	S	3.2	SSW	1.6	S	3.2	S
14:00-15:00	3.2	S	3.2	S	1.6	S	3.2	S
15:00-16:00	3.2	S	1.6	S	1.6	S	1.6	S
Temperature Average (°C)	28.3		29.8		30.2		28.9	
Barometric Pressure Average (mmHg)	758.30		758.15		758.07		757.50	
Sky Condition	Cloudy and Rainy		Fair		Fair		Cloudy and Rainy	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

Scientist

20 / 09 / 22

Technical Supervisor

20 / 09 / 22



RY0071/09/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 8-15 September 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 September 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	WWT4					
	September 2022					
	12-13		13-14		14-15	
	WS (km/hr)	WD	WS (km/hr)	WD	Fair	WD
16:00-17:00	3.2	S	4.8	NW	4.8	SSW
17:00-18:00	1.6	NW	3.2	SSW	6.4	SW
18:00-19:00	1.6	S	1.6	WNW	4.8	SSW
19:00-20:00	3.2	S	3.2	NW	4.8	SSW
20:00-21:00	3.2	NW	3.2	NW	3.2	S
21:00-22:00	3.2	WNW	3.2	WNW	3.2	S
22:00-23:00	1.6	WSW	3.2	WNW	4.8	S
23:00-00:00	1.6	NW	4.8	NW	6.4	SW
00:00-01:00	1.6	S	4.8	SSW	8.0	SW
01:00-02:00	1.6	WSW	3.2	SSW	8.0	SW
02:00-03:00	3.2	WNW	1.6	S	1.6	S
03:00-04:00	3.2	WSW	3.2	WNW	3.2	SSE
04:00-05:00	4.8	NW	3.2	W	4.8	S
05:00-06:00	3.2	NW	1.6	WNW	6.4	SSW
06:00-07:00	1.6	NW	1.6	NNW	6.4	S
07:00-08:00	1.6	NW	1.6	S	4.8	S
08:00-09:00	1.6	NNW	3.2	SW	1.6	S
09:00-10:00	1.6	S	3.2	S	1.6	S
10:00-11:00	1.6	S	1.6	S	1.6	SSE
11:00-12:00	3.2	SSW	1.6	S	1.6	S
12:00-13:00	3.2	S	6.4	SW	3.2	S
13:00-14:00	3.2	S	8.0	SW	3.2	S
14:00-15:00	4.8	NW	4.8	S	3.2	S
15:00-16:00	6.4	NW	6.4	SW	3.2	SSE
Temperature Average (°C)	28.4		28.5		29.9	
Barometric Pressure Average (mmHg)	757.51		758.17		758.11	
Sky Condition	Cloudy and Rainy		Fair		Fair	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

Scientist

10 / 09 / 22

Technical Supervisor

20 / 09 / 22



RY0073/09/65

R-Pro-1091-2/2021

Wind Speed and Wind Direction Measurement Report

Project : HMU-2 Sampling Date : 14-21 September 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 26 September 2022
Mueang, Rayong 21000
Client Name/Address : Wison Engineering Ltd.
Sampling By : S.P.S. Consulting Service Co., Ltd.

Wind Speed Wind Direction	Project Area				
	Percent of Wind Speed (%)				
	Light Air	Light Breeze	Gentle Breeze	Moderate Breeze	Fresh Breeze
	1-5 km/hr	6-11 km/hr	12-19 km/hr	20-28 km/hr	29-38 km/hr
N (349°-11°)	8.333	1.786	-	-	-
NNE (11°-34°)	-	-	-	-	-
NE (34°-56°)	0.595	-	-	-	-
ENE (56°-79°)	-	-	-	-	-
E (79°-102°)	0.595	-	-	-	-
ESE (102°-124°)	0.595	0.595	-	-	-
SE (124°-146°)	2.976	-	-	-	-
SSE (146°-169°)	0.595	-	-	-	-
S (169°-191°)	3.571	-	-	-	-
SSW (191°-214°)	4.167	1.786	-	-	-
SW (214°-236°)	9.524	0.595	-	-	-
WSW (236°-259°)	22.621	2.976	-	-	-
W (259°-281°)	7.143	2.381	-	-	-
WNW (281°-304°)	20.833	2.976	-	-	-
NW (304°-326°)	2.976	-	-	-	-
NNW (326°-349°)	2.381	-	-	-	-
Total	86.905	13.095	0.000	0.000	0.000
Calm (<1 km/hr)	0.000				

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

Scientist

26 / 09 / 22

Technical Supervisor

26 / 09 / 22



RY0073/09/65

R-Pro-1091-2/2021

Wind Speed and Wind Direction Measurement Report

Project : HMU-2 Sampling Date : 14-21 September 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000 Date Reported : 26 September 2022
Client Name/Address : Wison Engineering Ltd.
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Project Area							
	September 2022							
	14-15		15-16		16-17		17-18	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
12:00-13:00	3.2	WSW	6.4	WNW	3.2	WNW	3.2	W
13:00-14:00	3.2	SW	3.2	WNW	3.2	WSW	3.2	WSW
14:00-15:00	3.2	WSW	3.2	WSW	3.2	WSW	3.2	WSW
15:00-16:00	3.2	WSW	3.2	WNW	1.6	WSW	6.4	WSW
16:00-17:00	6.4	SSW	6.4	W	3.2	SSW	4.8	WSW
17:00-18:00	4.8	SW	6.4	WNW	3.2	SW	4.8	SW
18:00-19:00	3.2	SW	3.2	SW	1.6	WSW	3.2	WSW
19:00-20:00	6.4	SSW	3.2	SW	1.6	WSW	3.2	WSW
20:00-21:00	3.2	SW	4.8	WSW	3.2	WSW	3.2	WSW
21:00-22:00	3.2	SW	3.2	SSW	3.2	WSW	1.6	WSW
22:00-23:00	3.2	SW	3.2	SSW	4.8	SSW	1.6	WSW
23:00-00:00	1.6	S	1.6	SW	3.2	SW	3.2	WSW
00:00-01:00	1.6	S	1.6	SW	3.2	WNW	3.2	WNW
01:00-02:00	1.6	SSW	1.6	W	6.4	ESE	1.6	WNW
02:00-03:00	3.2	SSW	3.2	WNW	3.2	W	1.6	WNW
03:00-04:00	3.2	WNW	3.2	WNW	3.2	W	1.6	WNW
04:00-05:00	1.6	S	1.6	NNW	1.6	WSW	3.2	WSW
05:00-06:00	1.6	N	1.6	NNW	1.6	WSW	3.2	SW
06:00-07:00	1.6	ESE	3.2	NW	1.6	WSW	4.8	SW
07:00-08:00	1.6	NW	3.2	WNW	3.2	W	6.4	SSW
08:00-09:00	3.2	WNW	6.4	W	3.2	WSW	3.2	WSW
09:00-10:00	3.2	WNW	4.8	WSW	6.4	W	3.2	SW
10:00-11:00	6.4	WNW	4.8	WSW	4.8	WNW	6.4	WSW
11:00-12:00	8.0	W	3.2	WNW	3.2	WSW	6.4	WSW
Temperature Average (°C)	29.4		29.8		29.3		29.1	
Barometric Pressure Average (mmHg)	756.90		756.83		757.00		757.06	
Sky Condition	Cloudy and Rainy		Cloudy and Rainy		Cloudy and Rainy		Cloudy and Rainy	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

Scientist

26 / 09 / 22

(Thanyaporn Lamsatana)

Technical Supervisor

26 / 09 / 22



RY0073/09/65

R-Pro-1091-2/2021

Wind Speed and Wind Direction Measurement Report

Project : HMU-2 Sampling Date : 14-21 September 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 26 September 2022
Mueang, Rayong 21000
Client Name/Address : Wison Engineering Ltd.
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Project Area					
	September 2022					
	18-19		19-20		20-21	
	WS (km/hr)	WD	WS (km/hr)	WD	Fair	WD
12:00-13:00	3.2	WSW	3.2	W	3.2	WNW
13:00-14:00	3.2	WSW	3.2	W	6.4	WNW
14:00-15:00	3.2	WSW	3.2	W	4.8	WNW
15:00-16:00	6.4	SW	4.8	WNW	4.8	WNW
16:00-17:00	8.0	WSW	3.2	WNW	4.8	WNW
17:00-18:00	6.4	WSW	3.2	WNW	3.2	N
18:00-19:00	3.2	WSW	1.6	WNW	1.6	WNW
19:00-20:00	1.6	WSW	1.6	W	1.6	S
20:00-21:00	3.2	WNW	1.6	W	1.6	SE
21:00-22:00	3.2	NNW	3.2	WNW	3.2	SSE
22:00-23:00	1.6	N	3.2	NW	3.2	N
23:00-00:00	1.6	NE	3.2	NNW	1.6	N
00:00-01:00	1.6	SSW	3.2	WNW	1.6	SE
01:00-02:00	3.2	WSW	3.2	N	1.6	SE
02:00-03:00	3.2	W	1.6	WNW	3.2	SE
03:00-04:00	1.6	NW	1.6	WNW	3.2	SE
04:00-05:00	1.6	N	1.6	NW	4.8	N
05:00-06:00	3.2	N	3.2	N	6.4	N
06:00-07:00	3.2	N	3.2	N	8.0	N
07:00-08:00	6.4	N	4.8	E	3.2	N
08:00-09:00	4.8	S	6.4	WNW	4.8	WNW
09:00-10:00	4.8	S	3.2	WNW	3.2	W
10:00-11:00	3.2	WNW	3.2	WNW	3.2	N
11:00-12:00	3.2	WSW	3.2	WSW	3.2	WNW
Temperature Average (°C)	28.3		30.4		28.5	
Barometric Pressure Average (mmHg)	757.27		756.79		757.16	
Sky Condition	Cloudy and Rainy		Fair		Cloudy and Rainy	

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

Scientist

26 / 09 / 22

(Phatthayaphat Laisetthit)

Technical Supervisor

26 / 09 / 22

ระดับเสียง

Construction of Production Control Building



RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	October-November 2022		
	27-28		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:50-12:50	65.8	70.2	92.7
12:50-13:50	67.3		
13:50-14:50	69.5		
14:50-15:50	72.7		
15:50-16:50	70.5		
16:50-17:50	69.0		
17:50-18:50	70.1		
18:50-19:50	72.3		
19:50-20:50	67.9	69.3	95.3
20:50-21:50	70.5		
21:50-22:50	69.9		
22:50-23:50	67.2		
23:50-00:50	67.1		
00:50-01:50	66.6		
01:50-02:50	71.6		
02:50-03:50	70.6		
03:50-04:50	68.7	68.6	91.6
04:50-05:50	68.3		
05:50-06:50	69.0		
06:50-07:50	68.6		
07:50-08:50	69.3		
08:50-09:50	69.7		
09:50-10:50	68.3		
10:50-11:50	66.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R03)	ACO	6236	00132031
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruaewan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

2/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	October-November 2022		
	28-29		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:50-12:50	68.3	70.7	89.3
12:50-13:50	71.7		
13:50-14:50	71.6		
14:50-15:50	71.7		
15:50-16:50	70.5		
16:50-17:50	71.3		
17:50-18:50	70.5		
18:50-19:50	68.7		
19:50-20:50	68.5	71.1	88.6
20:50-21:50	69.4		
21:50-22:50	70.1		
22:50-23:50	68.0		
23:50-00:50	70.1		
00:50-01:50	73.3		
01:50-02:50	74.5		
02:50-03:50	70.7		
03:50-04:50	70.8	70.4	105.7
04:50-05:50	69.6		
05:50-06:50	72.4		
06:50-07:50	68.7		
07:50-08:50	70.5		
08:50-09:50	70.7		
09:50-10:50	70.3		
10:50-11:50	69.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R03)	ACO	6236	001302031
Actual Reading [dB]		Standard	
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.


(Tharatorn Khruaewari)

Scientist

07 / 11 / 22



(Khemmarin Thirathaset)

Technical Supervisor

07 / 11 / 22



RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	October–November 2022		
	29–30		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:50–12:50	68.3	68.9	88.6
12:50–13:50	68.0		
13:50–14:50	69.5		
14:50–15:50	69.8		
15:50–16:50	67.9		
16:50–17:50	68.1		
17:50–18:50	70.2		
18:50–19:50	68.6		
19:50–20:50	67.9	73.1	88.6
20:50–21:50	69.2		
21:50–22:50	69.6		
22:50–23:50	69.0		
23:50–00:50	68.1		
00:50–01:50	67.4		
01:50–02:50	75.8		
02:50–03:50	79.1		
03:50–04:50	79.0	76.1	93.1
04:50–05:50	78.3		
05:50–06:50	78.3		
06:50–07:50	77.6		
07:50–08:50	73.7		
08:50–09:50	70.6		
09:50–10:50	71.3		
10:50–11:50	69.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R03)	ACO	6236	00132031
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

4/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	October-November 2022		
	30-31		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:50-12:50	68.6	70.6	89.3
12:50-13:50	70.3		
13:50-14:50	71.4		
14:50-15:50	71.2		
15:50-16:50	70.6		
16:50-17:50	70.7		
17:50-18:50	71.3		
18:50-19:50	70.3		
19:50-20:50	70.3	73.2	93.5
20:50-21:50	74.1		
21:50-22:50	72.8		
22:50-23:50	74.1		
23:50-00:50	73.1		
00:50-01:50	71.7		
01:50-02:50	72.8		
02:50-03:50	74.7		
03:50-04:50	74.5	71.2	91.5
04:50-05:50	73.3		
05:50-06:50	73.6		
06:50-07:50	64.6		
07:50-08:50	66.4		
08:50-09:50	69.8		
09:50-10:50	69.9		
10:50-11:50	68.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R03)	ACO	6236	00132031
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khrueawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscon.com., www.spscon.com

5/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	October-November 2022		
	31-1		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:50-12:50	69.4	70.5	89.2
12:50-13:50	68.6		
13:50-14:50	70.6		
14:50-15:50	71.4		
15:50-16:50	70.7		
16:50-17:50	70.5		
17:50-18:50	70.8		
18:50-19:50	71.0		
19:50-20:50	69.8	70.0	89.2
20:50-21:50	70.4		
21:50-22:50	71.1		
22:50-23:50	70.9		
23:50-00:50	70.0		
00:50-01:50	68.4		
01:50-02:50	70.0		
02:50-03:50	68.9		
03:50-04:50	69.5	69.5	102.9
04:50-05:50	70.1		
05:50-06:50	68.2		
06:50-07:50	67.5		
07:50-08:50	68.4		
08:50-09:50	69.4		
09:50-10:50	71.0		
10:50-11:50	70.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R03)	ACO	6236	00132031
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tharom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	October-November 2022		
	1-2		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:50-12:50	68.7	69.9	92.7
12:50-13:50	67.1		
13:50-14:50	70.5		
14:50-15:50	70.5		
15:50-16:50	71.5		
16:50-17:50	69.8		
17:50-18:50	70.4		
18:50-19:50	69.1		
19:50-20:50	68.0	68.9	77.4
20:50-21:50	68.1		
21:50-22:50	69.0		
22:50-23:50	69.1		
23:50-00:50	68.4		
00:50-01:50	69.2		
01:50-02:50	69.6		
02:50-03:50	69.6		
03:50-04:50	69.5	70.1	102.2
04:50-05:50	68.8		
05:50-06:50	68.5		
06:50-07:50	67.9		
07:50-08:50	68.0		
08:50-09:50	69.4		
09:50-10:50	71.0		
10:50-11:50	73.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R03)	ACO	6236	00132031
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscon.com., www.spscon.com

7/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October- 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	October-November 2022		
	2-3		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:50-12:50	72.5	73.5	93.5
12:50-13:50	73.7		
13:50-14:50	74.0		
14:50-15:50	71.6		
15:50-16:50	72.7		
16:50-17:50	74.0		
17:50-18:50	75.1		
18:50-19:50	73.3		
19:50-20:50	73.5	73.1	84.9
20:50-21:50	74.4		
21:50-22:50	74.6		
22:50-23:50	74.8		
23:50-00:50	73.9		
00:50-01:50	73.1		
01:50-02:50	67.6		
02:50-03:50	65.9	70.2	91.5
03:50-04:50	69.1		
04:50-05:50	69.8		
05:50-06:50	67.7		
06:50-07:50	63.9		
07:50-08:50	65.8		
08:50-09:50	71.5		
09:50-10:50	74.0		
10:50-11:50	71.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R03)	ACO	6236	00132031
Standard			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Signature)
Scientist
07 / 11 / 22

(Khemmarin Thirarathaset)
Technical Supervisor
07 / 11 / 22



RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 7 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	October - November 2022		
	27-28		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	57.5	64.3	90.6
13:00-14:00	65.0		
14:00-15:00	68.5		
15:00-16:00	65.2		
16:00-17:00	63.5		
17:00-18:00	62.6		
18:00-19:00	62.3		
19:00-20:00	62.0		
20:00-21:00	61.4	59.8	90.0
21:00-22:00	61.6		
22:00-23:00	59.8		
23:00-00:00	58.7		
00:00-01:00	55.8		
01:00-02:00	57.2		
02:00-03:00	61.4		
03:00-04:00	59.2		
04:00-05:00	57.3	68.8	96.3
05:00-06:00	58.7		
06:00-07:00	61.1		
07:00-08:00	63.1		
08:00-09:00	69.8		
09:00-10:00	70.3		
10:00-11:00	75.0		
11:00-12:00	66.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	October - November 2022		
	28-29		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	65.6	65.3	92.3
13:00-14:00	64.4		
14:00-15:00	67.7		
15:00-16:00	66.3		
16:00-17:00	63.9		
17:00-18:00	65.0		
18:00-19:00	64.4		
19:00-20:00	63.8		
20:00-21:00	63.9	64.4	91.7
21:00-22:00	62.7		
22:00-23:00	63.3		
23:00-00:00	61.6		
00:00-01:00	56.7		
01:00-02:00	55.7		
02:00-03:00	66.2		
03:00-04:00	69.7		
04:00-05:00	69.5	68.7	97.1
05:00-06:00	69.0		
06:00-07:00	69.3		
07:00-08:00	68.9		
08:00-09:00	69.8		
09:00-10:00	66.6		
10:00-11:00	68.7		
11:00-12:00	67.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscon.com., www.spscon.com

3/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	October – November 2022		
	29-30		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	64.2	66.1	92.4
13:00-14:00	58.9		
14:00-15:00	67.2		
15:00-16:00	70.2		
16:00-17:00	66.9		
17:00-18:00	65.2		
18:00-19:00	64.5		
19:00-20:00	63.6		
20:00-21:00	63.7	62.0	93.5
21:00-22:00	62.9		
22:00-23:00	63.2		
23:00-00:00	60.9		
00:00-01:00	61.8		
01:00-02:00	56.9		
02:00-03:00	59.7		
03:00-04:00	63.5		
04:00-05:00	60.2	70.3	98.2
05:00-06:00	59.0		
06:00-07:00	60.6		
07:00-08:00	62.8		
08:00-09:00	67.1		
09:00-10:00	72.1		
10:00-11:00	73.4		
11:00-12:00	75.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Pharom Khruaewat)

Scientist

07 / 11 / 22

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

4/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	October - November 2022		
	30-31		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	63.0	67.6	67.4
13:00-14:00	61.9		
14:00-15:00	66.4		
15:00-16:00	65.8		
16:00-17:00	64.4		
17:00-18:00	62.8		
18:00-19:00	60.8		
19:00-20:00	63.1		
20:00-21:00	60.6	62.8	62.7
21:00-22:00	60.2		
22:00-23:00	61.5		
23:00-00:00	60.3		
00:00-01:00	58.6		
01:00-02:00	55.5		
02:00-03:00	55.6		
03:00-04:00	68.0		
04:00-05:00	69.7	66.4	65.4
05:00-06:00	69.4		
06:00-07:00	69.1		
07:00-08:00	69.3		
08:00-09:00	69.7		
09:00-10:00	68.8		
10:00-11:00	66.7		
11:00-12:00	69.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Yimaron Khruaewat)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

5/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 7 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	October - November 2022		
	31-1		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	64.1	68.9	98.0
13:00-14:00	62.5		
14:00-15:00	71.0		
15:00-16:00	73.1		
16:00-17:00	68.4		
17:00-18:00	70.0		
18:00-19:00	66.6		
19:00-20:00	64.4		
20:00-21:00	64.8	62.3	89.9
21:00-22:00	62.9		
22:00-23:00	63.0		
23:00-00:00	63.1		
00:00-01:00	61.1		
01:00-02:00	59.8		
02:00-03:00	60.7		
03:00-04:00	60.8		
04:00-05:00	61.1	65.0	91.5
05:00-06:00	61.6		
06:00-07:00	61.7		
07:00-08:00	63.1		
08:00-09:00	63.1		
09:00-10:00	66.6		
10:00-11:00	68.7		
11:00-12:00	66.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

[Signature]

Scientist

07 / 11 / 22

[Signature]

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area				
	October - November 2022				
	1-2				
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]		
12:00-13:00	63.8	68.8	97.9		
13:00-14:00	60.6				
14:00-15:00	66.2				
15:00-16:00	66.2				
16:00-17:00	65.9				
17:00-18:00	75.7				
18:00-19:00	66.0				
19:00-20:00	65.1				
20:00-21:00	64.1	61.5	92.4		
21:00-22:00	62.5				
22:00-23:00	61.0				
23:00-00:00	61.4				
00:00-01:00	60.3				
01:00-02:00	60.3				
02:00-03:00	59.6				
03:00-04:00	60.5				
04:00-05:00	59.9	63.6	91.5		
05:00-06:00	59.8				
06:00-07:00	60.9				
07:00-08:00	62.5				
08:00-09:00	63.1				
09:00-10:00	66.3				
10:00-11:00	65.4				
11:00-12:00	65.7				
Standard		Less Than 90.0		Less Than 140.0 ^[1] , 115.0 ^[2]	
Sound Level Meter Data					
Calibrate Sheet No.: Noise R_521/22			26 October 2022		
Equipment		Brand	Model	Serial No.	Standard
Sound Level Meter (No.R18)		ACO	6236	00172065	IEC 61672
Actual Reading [dB]					
Before Adjustment			After Adjustment		
94.1			94.0		

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

[Redacted Signature]

Scientist

07 / 11 / 22

[Redacted Signature]
(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

7/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	October - November 2022		
	2-3		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12:00-13:00	58.9	67.1	96.3
13:00-14:00	68.4		
14:00-15:00	71.8		
15:00-16:00	66.5		
16:00-17:00	68.3		
17:00-18:00	64.9		
18:00-19:00	62.8		
19:00-20:00	63.1		
20:00-21:00	61.3	60.2	79.6
21:00-22:00	61.2		
22:00-23:00	61.7		
23:00-00:00	59.6		
00:00-01:00	58.1		
01:00-02:00	59.0		
02:00-03:00	59.5		
03:00-04:00	59.6		
04:00-05:00	60.2	63.5	89.9
05:00-06:00	60.2		
06:00-07:00	61.5		
07:00-08:00	61.3		
08:00-09:00	64.6		
09:00-10:00	66.9		
10:00-11:00	65.1		
11:00-12:00	62.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization, Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

[Redacted Signature]
(Tharom Khruaewat)

Scientist

07 / 11 / 22

[Redacted Signature]
(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

1/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	October-November 2022		
	27-28		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:40-12:40	56.2	59.3	86.6
12:40-13:40	59.7		
13:40-14:40	61.1		
14:40-15:40	60.2		
15:40-16:40	61.9		
16:40-17:40	55.9		
17:40-18:40	56.7		
18:40-19:40	58.6		
19:40-20:40	56.2	55.1	78.7
20:40-21:40	55.1		
21:40-22:40	56.2		
22:40-23:40	54.6		
23:40-00:40	51.5		
00:40-01:40	50.1		
01:40-02:40	53.7		
02:40-03:40	58.0		
03:40-04:40	58.1	62.3	95.3
04:40-05:40	60.1		
05:40-06:40	59.6		
06:40-07:40	60.3		
07:40-08:40	65.5		
08:40-09:40	65.1		
09:40-10:40	61.4		
10:40-11:40	62.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R26)	ACO	6236	00192038
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.


(Tinarom Khruaewan)

Scientist

07 / 11 / 22


(Tinarom Khruaewan)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

2/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October – 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	October~November 2022		
	28-29		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:40-12:40	53.8	64.7	102.6
12:40-13:40	69.0		
13:40-14:40	64.8		
14:40-15:40	64.0		
15:40-16:40	63.3		
16:40-17:40	67.9		
17:40-18:40	58.8		
18:40-19:40	58.8		
19:40-20:40	58.8	55.5	84.7
20:40-21:40	56.9		
21:40-22:40	59.1		
22:40-23:40	53.7		
23:40-00:40	50.8		
00:40-01:40	50.1		
01:40-02:40	51.8		
02:40-03:40	51.9		
03:40-04:40	51.6	60.5	91.7
04:40-05:40	55.7		
05:40-06:40	56.4		
06:40-07:40	57.0		
07:40-08:40	61.0		
08:40-09:40	64.5		
09:40-10:40	63.9		
10:40-11:40	59.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R 521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R26)	ACO	6236	00192038
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruaewan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscn.com, www.spscn.com

3/7

RY0169/10/85

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October – 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	October–November 2022		
	29–30		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:40–12:40	56.1	62.6	95.4
12:40–13:40	60.0		
13:40–14:40	61.4		
14:40–15:40	63.7		
15:40–16:40	64.8		
16:40–17:40	63.7		
17:40–18:40	61.9		
18:40–19:40	64.0		
19:40–20:40	59.9	59.5	86.1
20:40–21:40	60.6		
21:40–22:40	60.0		
22:40–23:40	58.0		
23:40–00:40	56.3		
00:40–01:40	56.2		
01:40–02:40	61.1		
02:40–03:40	61.0		
03:40–04:40	58.5	64.7	90.5
04:40–05:40	58.7		
05:40–06:40	61.4		
06:40–07:40	61.9		
07:40–08:40	64.2		
08:40–09:40	67.0		
09:40–10:40	69.5		
10:40–11:40	64.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R26)	ACO	6236	00192038
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

[Signature]
(Tinarom Khruawan)

Scientist

07 / 11 / 22

[Signature]
(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

4/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	October~November 2022		
	30-31		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:40-12:40	59.7	63.1	90.8
12:40-13:40	63.4		
13:40-14:40	64.9		
14:40-15:40	64.0		
15:40-16:40	65.7		
16:40-17:40	59.7		
17:40-18:40	60.5		
18:40-19:40	62.3		
19:40-20:40	60.0	58.7	81.1
20:40-21:40	58.9		
21:40-22:40	59.8		
22:40-23:40	58.3		
23:40-00:40	55.1		
00:40-01:40	53.6		
01:40-02:40	57.3		
02:40-03:40	61.6		
03:40-04:40	61.7	66.2	101.2
04:40-05:40	63.8		
05:40-06:40	63.2		
06:40-07:40	63.9		
07:40-08:40	69.1		
08:40-09:40	69.5		
09:40-10:40	65.4		
10:40-11:40	66.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R26)	ACO	6236	00192038
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thiraratset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscn.com, www.spscn.com

5/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October – 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	October~November 2022		
	31~1		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:40~12:40	58.9	68.3	105.3
12:40~13:40	72.9		
13:40~14:40	68.0		
14:40~15:40	67.8		
15:40~16:40	66.8		
16:40~17:40	71.2		
17:40~18:40	62.4		
18:40~19:40	62.7		
19:40~20:40	62.6	59.3	88.9
20:40~21:40	60.4		
21:40~22:40	63.1		
22:40~23:40	57.5		
23:40~00:40	54.7		
00:40~01:40	53.6		
01:40~02:40	55.5		
02:40~03:40	55.5		
03:40~04:40	55.4	64.2	89.8
04:40~05:40	59.4		
05:40~06:40	59.7		
06:40~07:40	60.7		
07:40~08:40	64.4		
08:40~09:40	67.8		
09:40~10:40	67.9		
10:40~11:40	64.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R26)	ACO	6236	00192038
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

6/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	October-November 2022		
	1-2		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:40-12:40	60.3	64.8	103.9
12:40-13:40	63.3		
13:40-14:40	65.7		
14:40-15:40	65.3		
15:40-16:40	65.5		
16:40-17:40	68.3		
17:40-18:40	62.2		
18:40-19:40	62.8		
19:40-20:40	62.1	58.2	85.3
20:40-21:40	57.8		
21:40-22:40	58.6		
22:40-23:40	57.8		
23:40-00:40	56.1		
00:40-01:40	54.6		
01:40-02:40	57.2		
02:40-03:40	57.4		
03:40-04:40	56.2	62.6	97.0
04:40-05:40	56.4		
05:40-06:40	60.1		
06:40-07:40	59.7		
07:40-08:40	68.3		
08:40-09:40	65.4		
09:40-10:40	64.7		
10:40-11:40	64.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R26)	ACO	6236	00192038
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

7/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	October-November 2022		
	2-3		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:40-12:40	64.5	62.9	100.3
12:40-13:40	66.3		
13:40-14:40	60.5		
14:40-15:40	60.8		
15:40-16:40	64.3		
16:40-17:40	62.7		
17:40-18:40	57.9		
18:40-19:40	59.0	54.5	82.2
19:40-20:40	58.2		
20:40-21:40	54.3		
21:40-22:40	55.2		
22:40-23:40	53.5		
23:40-00:40	52.4		
00:40-01:40	51.3		
01:40-02:40	53.6	59.5	90.8
02:40-03:40	53.7		
03:40-04:40	52.6		
04:40-05:40	52.9		
05:40-06:40	56.9		
06:40-07:40	56.2		
07:40-08:40	60.7		
08:40-09:40	61.6		
09:40-10:40	60.9		
10:40-11:40	63.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R 521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R26)	ACO	6236	00192038
Actual Reading [dB]		Standard	
Before Adjustment		After Adjustment	
94.0		94.0	
Standard			
IEC 61672			

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

1/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 7 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	October–November 2022		
	27–28		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:15–11:15	80.7	75.4	105.2
11:15–12:15	73.4		
12:15–13:15	72.7		
13:15–14:15	73.0		
14:15–15:15	73.3		
15:15–16:15	73.1		
16:15–17:15	75.3		
17:15–18:15	73.5		
18:15–19:15	73.5	73.3	76.2
19:15–20:15	73.4		
20:15–21:15	73.4		
21:15–22:15	73.5		
22:15–23:15	73.6		
23:15–00:15	73.6		
00:15–01:15	72.9		
01:15–02:15	72.5		
02:15–03:15	73.2	74.2	103.2
03:15–04:15	74.1		
04:15–05:15	74.3		
05:15–06:15	73.2		
06:15–07:15	72.5		
07:15–08:15	73.1		
08:15–09:15	76.3		
09:15–10:15	75.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R. 521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R50)	ACO	6236	00192062
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tharom Khueawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

2/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October -02 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 07 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	October-November 2022		
	28-29		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:15-11:15	77.2	74.5	101.8
11:15-12:15	75.5		
12:15-13:15	73.5		
13:15-14:15	73.6		
14:15-15:15	73.3		
15:15-16:15	73.6		
16:15-17:15	73.7		
17:15-18:15	73.5		
18:15-19:15	73.6	73.2	78.9
19:15-20:15	73.3		
20:15-21:15	73.2		
21:15-22:15	73.2		
22:15-23:15	73.4		
23:15-00:15	72.8		
00:15-01:15	72.9		
01:15-02:15	73.1		
02:15-03:15	73.3	73.5	98.9
03:15-04:15	73.2		
04:15-05:15	73.8		
05:15-06:15	73.5		
06:15-07:15	73.5		
07:15-08:15	73.5		
08:15-09:15	74.0		
09:15-10:15	73.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R50)	ACO	6236	00192062
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment, Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscon.com., www.spscon.com

3/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October -02 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 07 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	October-November 2022		
	29-30		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:15-11:15	73.4	73.5	99.8
11:15-12:15	73.5		
12:15-13:15	73.0		
13:15-14:15	72.9		
14:15-15:15	74.5		
15:15-16:15	73.5		
16:15-17:15	73.2		
17:15-18:15	73.5		
18:15-19:15	73.2	73.6	81.6
19:15-20:15	73.6		
20:15-21:15	73.6		
21:15-22:15	73.5		
22:15-23:15	73.9		
23:15-00:15	74.1		
00:15-01:15	73.4		
01:15-02:15	73.7		
02:15-03:15	73.8	74.1	91.8
03:15-04:15	73.3		
04:15-05:15	74.1		
05:15-06:15	74.3		
06:15-07:15	74.3		
07:15-08:15	73.5		
08:15-09:15	74.1		
09:15-10:15	74.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R 521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R50)	ACO	6236	00192062
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

[Signature]
(Tinarom Khruawan)

Scientist

07 / 11 / 22

[Signature]
(Khemmarin Thirarathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

4/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October -02 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 07 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	October-November 2022		
	30-31		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
10:15-11:15	74.6	75.0	107.1
11:15-12:15	76.6		
12:15-13:15	73.7		
13:15-14:15	74.2		
14:15-15:15	74.4		
15:15-16:15	73.4		
16:15-17:15	77.1		
17:15-18:15	74.3		
18:15-19:15	74.5	74.3	84.2
19:15-20:15	75.3		
20:15-21:15	74.7		
21:15-22:15	75.2		
22:15-23:15	74.4		
23:15-00:15	73.6		
00:15-01:15	73.0		
01:15-02:15	72.9	73.1	96.2
02:15-03:15	73.1		
03:15-04:15	72.7		
04:15-05:15	73.1		
05:15-06:15	73.1		
06:15-07:15	73.0		
07:15-08:15	73.2		
08:15-09:15	72.8		
09:15-10:15	73.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R50)	ACO	6236	00192062
Actual Reading [dB]		Standard	
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72 Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

5/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October -02 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 07 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	October-November 2022		
	31-1		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:15-11:15	73.2	73.7	82.1
11:15-12:15	73.8		
12:15-13:15	72.6		
13:15-14:15	73.2		
14:15-15:15	73.9		
15:15-16:15	74.5		
16:15-17:15	74.3		
17:15-18:15	74.2		
18:15-19:15	74.1	73.5	76.6
19:15-20:15	74.0		
20:15-21:15	73.8		
21:15-22:15	73.5		
22:15-23:15	73.5		
23:15-00:15	73.5		
00:15-01:15	73.0		
01:15-02:15	72.9		
02:15-03:15	72.7	73.1	79.8
03:15-04:15	72.8		
04:15-05:15	73.1		
05:15-06:15	73.4		
06:15-07:15	73.4		
07:15-08:15	73.4		
08:15-09:15	73.1		
09:15-10:15	73.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R 521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R50)	ACO	6236	00192062
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruaewan)

Scientist

07 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

6/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October -02 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 07 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	October-November 2022		
	1-2		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:15-11:15	73.2	73.6	76.2
11:15-12:15	74.1		
12:15-13:15	73.6		
13:15-14:15	74.1		
14:15-15:15	73.9		
15:15-16:15	73.8		
16:15-17:15	73.8		
17:15-18:15	71.6		
18:15-19:15	74.6	74.5	75.0
19:15-20:15	73.8		
20:15-21:15	73.6		
21:15-22:15	73.6		
22:15-23:15	73.5		
23:15-00:15	73.5		
00:15-01:15	73.1		
01:15-02:15	73.1		
02:15-03:15	73.1	73.0	76.8
03:15-04:15	73.0		
04:15-05:15	73.4		
05:15-06:15	73.4		
06:15-07:15	73.2		
07:15-08:15	73.1		
08:15-09:15	73.0		
09:15-10:15	72.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R. 521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R50)	ACO	6236	00192062
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment, Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

07 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72 Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

7/7

RY0169/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October -02 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 07 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	October-November 2022		
	2-3		
	$L_{eq} 1 \text{ hr [dB(A)]}$	$L_{eq} 8 \text{ hr [dB(A)]}$	$L_{max} [dB(A)]$
10:15-11:15	72.8	82.7	82.7
11:15-12:15	72.3		
12:15-13:15	73.0		
13:15-14:15	72.3		
14:15-15:15	74.0		
15:15-16:15	74.1		
16:15-17:15	73.2		
17:15-18:15	72.9		
18:15-19:15	73.6	73.2	82.0
19:15-20:15	73.4		
20:15-21:15	73.2		
21:15-22:15	73.3		
22:15-23:15	73.0		
23:15-00:15	73.4		
00:15-01:15	73.2		
01:15-02:15	72.4		
02:15-03:15	72.3	72.6	80.5
03:15-04:15	72.3		
04:15-05:15	72.9		
05:15-06:15	72.9		
06:15-07:15	72.8		
07:15-08:15	72.5		
08:15-09:15	72.1		
09:15-10:15	72.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R 521/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R50)	ACO	6236	00192062
Actual Reading [dB]		Standard	
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N. 130006, IEC 60942

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

07 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

07 / 11 / 22

New Cooling Tower



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

1/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (East Area)		
	November 2022		
	14-15		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	76.6	76.3	95.5
12:00-13:00	75.0		
13:00-14:00	76.1		
14:00-15:00	75.5		
15:00-16:00	75.2		
16:00-17:00	75.3		
17:00-18:00	75.4		
18:00-19:00	74.6		
19:00-20:00	74.4	74.5	93.0
20:00-21:00	73.9		
21:00-22:00	73.0		
22:00-23:00	73.5		
23:00-00:00	73.4		
00:00-01:00	74.7		
01:00-02:00	75.1		
02:00-03:00	73.1		
03:00-04:00	72.7	73.9	93.1
04:00-05:00	74.4		
05:00-06:00	73.3		
06:00-07:00	74.2		
07:00-08:00	75.7		
08:00-09:00	76.4		
09:00-10:00	77.0		
10:00-11:00	77.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R12)	ACO	6236	00172040
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

2/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (East Area)		
	November 2022		
	15-16		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	75.1	76.4	96.1
12:00-13:00	74.1		
13:00-14:00	76.4		
14:00-15:00	75.8		
15:00-16:00	76.5		
16:00-17:00	75.0		
17:00-18:00	77.2		
18:00-19:00	76.1		
19:00-20:00	75.4	75.8	95.9
20:00-21:00	75.5		
21:00-22:00	75.4		
22:00-23:00	74.7		
23:00-00:00	74.4		
00:00-01:00	72.6		
01:00-02:00	72.1		
02:00-03:00	72.1		
03:00-04:00	72.4	72.7	94.1
04:00-05:00	72.2		
05:00-06:00	72.3		
06:00-07:00	72.7		
07:00-08:00	74.5		
08:00-09:00	76.3		
09:00-10:00	77.4		
10:00-11:00	79.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R12)	ACO	6236	00172040
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

3/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 24 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (East Area)		
	November 2022		
	16-17		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	75.5	76.5	99.8
12:00-13:00	74.7		
13:00-14:00	75.7		
14:00-15:00	75.8		
15:00-16:00	78.3		
16:00-17:00	75.1		
17:00-18:00	76.5		
18:00-19:00	75.9		
19:00-20:00	76.1	76.0	97.6
20:00-21:00	75.0		
21:00-22:00	75.6		
22:00-23:00	74.5		
23:00-00:00	73.5		
00:00-01:00	72.3		
01:00-02:00	71.8		
02:00-03:00	71.7		
03:00-04:00	71.8	72.7	93.2
04:00-05:00	71.5		
05:00-06:00	72.9		
06:00-07:00	74.8		
07:00-08:00	75.8		
08:00-09:00	76.7		
09:00-10:00	77.8		
10:00-11:00	78.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R12)	ACO	6236	00172040
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruasawan)

Scientist

24 / 11 / 22

(Khemmarin Thiraratset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

4/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 24 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (East Area)		
	November 2022		
	17-18		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:00-12:00	74.3	75.7	96.8
12:00-13:00	73.9		
13:00-14:00	74.1		
14:00-15:00	76.5		
15:00-16:00	76.7		
16:00-17:00	74.5		
17:00-18:00	75.0		
18:00-19:00	73.1		
19:00-20:00	74.6	74.9	87.2
20:00-21:00	74.0		
21:00-22:00	75.5		
22:00-23:00	74.8		
23:00-00:00	74.0		
00:00-01:00	73.3		
01:00-02:00	72.7		
02:00-03:00	73.0		
03:00-04:00	73.1	73.5	97.2
04:00-05:00	74.4		
05:00-06:00	73.3		
06:00-07:00	74.2		
07:00-08:00	74.1		
08:00-09:00	74.9		
09:00-10:00	76.7		
10:00-11:00	78.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R12)	ACO	6236	00172040
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)
Scientist
24 / 11 / 22

(Khenmarin Thirarathaset)
Technical Supervisor
24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

5/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (East Area)		
	November 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	76.2	76.4	94.6
12:00-13:00	75.1		
13:00-14:00	78.8		
14:00-15:00	77.9		
15:00-16:00	77.7		
16:00-17:00	79.7		
17:00-18:00	77.5		
18:00-19:00	75.7		
19:00-20:00	75.1	76.7	86.4
20:00-21:00	75.5		
21:00-22:00	74.9		
22:00-23:00	74.1		
23:00-00:00	74.5		
00:00-01:00	74.5		
01:00-02:00	74.2		
02:00-03:00	73.7		
03:00-04:00	74.1	73.9	93.3
04:00-05:00	73.1		
05:00-06:00	73.4		
06:00-07:00	73.5		
07:00-08:00	73.4		
08:00-09:00	76.0		
09:00-10:00	76.3		
10:00-11:00	75.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R12)	ACO	6236	00172040
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

6/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 24 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (East Area)				
	November 2022				
	19-20				
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]		L _{max} [dB(A)]	
11:00-12:00	75.0	76.0	90.6		
12:00-13:00	73.8				
13:00-14:00	75.0				
14:00-15:00	76.4				
15:00-16:00	77.3				
16:00-17:00	76.8				
17:00-18:00	75.6				
18:00-19:00	74.4				
19:00-20:00	74.0	74.9	82.6		
20:00-21:00	73.1				
21:00-22:00	73.5				
22:00-23:00	72.4				
23:00-00:00	73.0				
00:00-01:00	73.0				
01:00-02:00	72.4				
02:00-03:00	73.6				
03:00-04:00	73.7	73.4	94.6		
04:00-05:00	73.3				
05:00-06:00	74.0				
06:00-07:00	73.6				
07:00-08:00	75.9				
08:00-09:00	76.5				
09:00-10:00	77.8				
10:00-11:00	76.5				
Standard		Less Than 90.0		Less Than 140.0 ^[1] , 115.0 ^[2]	
Sound Level Meter Data					
Calibrate Sheet No.: Noise R_603/22			13 November 2022		
Equipment		Brand	Model	Serial No.	Standard
Sound Level Meter (No.R12)		ACO	6236	00172040	IEC 61672
Actual Reading [dB]					
Before Adjustment			After Adjustment		
94.1			94.0		

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,

Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscn.com, www.spscn.com

7/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (East Area)		
	November 2022		
	20-21		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	76.2	76.2	93.2
12:00-13:00	75.5		
13:00-14:00	73.5		
14:00-15:00	74.2		
15:00-16:00	75.8		
16:00-17:00	74.3		
17:00-18:00	78.6		
18:00-19:00	75.7		
19:00-20:00	75.1	75.9	82.4
20:00-21:00	75.3		
21:00-22:00	75.5		
22:00-23:00	75.7		
23:00-00:00	75.1		
00:00-01:00	75.2		
01:00-02:00	74.8		
02:00-03:00	74.9		
03:00-04:00	74.7	74.8	97.4
04:00-05:00	74.4		
05:00-06:00	74.9		
06:00-07:00	74.7		
07:00-08:00	75.3		
08:00-09:00	77.0		
09:00-10:00	78.6		
10:00-11:00	77.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R12)	ACO	6236	00172040
Actual Reading [dB]		Standard	
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruaewan)

Scientist
24 / 11 / 22

(Khemmarin Thiraratthaset)

Technical Supervisor
24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

1/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (South Area)		
	November 2022		
	14-15		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12.00-13.00	76.5	76.9	99.1
13.00-14.00	76.6		
14.00-15.00	78.0		
15.00-16.00	77.0		
16.00-17.00	76.8		
17.00-18.00	77.0		
18.00-19.00	76.1		
19.00-20.00	75.8		
20.00-21.00	75.7	76.2	92.9
21.00-22.00	76.2		
22.00-23.00	76.3		
23.00-00.00	75.6		
00.00-01.00	76.3		
01.00-02.00	75.5		
02.00-03.00	76.1		
03.00-04.00	77.4		
04.00-05.00	75.7	76.5	96.0
05.00-06.00	76.0		
06.00-07.00	77.5		
07.00-08.00	77.2		
08.00-09.00	77.3		
09.00-10.00	76.7		
10.00-11.00	76.6		
11.00-12.00	76.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol. Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

2/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (South Area)		
	November 2022		
	15-16		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	79.2	79.2	95.0
13.00-14.00	79.1		
14.00-15.00	78.8		
15.00-16.00	79.4		
16.00-17.00	79.8		
17.00-18.00	79.6		
18.00-19.00	78.4		
19.00-20.00	79.3		
20.00-21.00	79.0	79.2	93.5
21.00-22.00	79.9		
22.00-23.00	78.9		
23.00-00.00	78.7		
00.00-01.00	79.4		
01.00-02.00	78.9		
02.00-03.00	78.8		
03.00-04.00	78.7		
04.00-05.00	78.7	78.9	98.8
05.00-06.00	78.6		
06.00-07.00	78.9		
07.00-08.00	79.2		
08.00-09.00	79.2		
09.00-10.00	79.0		
10.00-11.00	79.1		
11.00-12.00	79.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol. Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

3/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (South Area)		
	November 2022		
	16-17		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	78.2	78.0	91.9
13.00-14.00	78.0		
14.00-15.00	77.9		
15.00-16.00	78.1		
16.00-17.00	78.4		
17.00-18.00	78.4		
18.00-19.00	78.6		
19.00-20.00	75.8		
20.00-21.00	78.2	78.3	90.9
21.00-22.00	78.2		
22.00-23.00	78.1		
23.00-00.00	78.4		
00.00-01.00	77.9		
01.00-02.00	78.0		
02.00-03.00	78.2		
03.00-04.00	77.4		
04.00-05.00	78.0	77.7	96.9
05.00-06.00	76.5		
06.00-07.00	77.0		
07.00-08.00	77.2		
08.00-09.00	78.3		
09.00-10.00	77.0		
10.00-11.00	78.1		
11.00-12.00	76.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruacawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

4/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (South Area)		
	November 2022		
	17-18		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12.00-13.00	78.4	78.1	95.4
13.00-14.00	78.1		
14.00-15.00	77.5		
15.00-16.00	78.1		
16.00-17.00	77.6		
17.00-18.00	77.0		
18.00-19.00	76.8		
19.00-20.00	76.1		
20.00-21.00	76.5	76.9	92.2
21.00-22.00	76.2		
22.00-23.00	77.9		
23.00-00.00	76.8		
00.00-01.00	78.0		
01.00-02.00	77.7		
02.00-03.00	77.7		
03.00-04.00	77.3		
04.00-05.00	77.5	77.6	94.4
05.00-06.00	77.0		
06.00-07.00	77.6		
07.00-08.00	77.8		
08.00-09.00	78.2		
09.00-10.00	78.4		
10.00-11.00	78.2		
11.00-12.00	77.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

5/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Maeang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (South Area)		
	November 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	78.3	78.6	97.1
13.00-14.00	78.9		
14.00-15.00	78.7		
15.00-16.00	78.6		
16.00-17.00	79.9		
17.00-18.00	79.2		
18.00-19.00	80.0		
19.00-20.00	79.7		
20.00-21.00	78.7	79.2	98.1
21.00-22.00	78.5		
22.00-23.00	78.7		
23.00-00.00	78.6		
00.00-01.00	79.8		
01.00-02.00	79.1		
02.00-03.00	78.1		
03.00-04.00	77.9		
04.00-05.00	77.5	78.4	97.9
05.00-06.00	77.5		
06.00-07.00	78.2		
07.00-08.00	79.0		
08.00-09.00	78.2		
09.00-10.00	78.5		
10.00-11.00	79.1		
11.00-12.00	78.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

- Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thiraratset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompoi, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

6/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (South Area)				
	November 2022				
	19-20				
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]		L _{max} [dB(A)]	
12.00-13.00	77.3	78.4	88.0		
13.00-14.00	77.8				
14.00-15.00	78.6				
15.00-16.00	78.4				
16.00-17.00	78.5				
17.00-18.00	78.3				
18.00-19.00	77.3				
19.00-20.00	78.8				
20.00-21.00	78.0	78.1	84.9		
21.00-22.00	78.7				
22.00-23.00	78.2				
23.00-00.00	76.8				
00.00-01.00	76.6				
01.00-02.00	76.4				
02.00-03.00	76.3				
03.00-04.00	76.8				
04.00-05.00	76.7	77.1	98.3		
05.00-06.00	77.2				
06.00-07.00	78.1				
07.00-08.00	78.5				
08.00-09.00	78.7				
09.00-10.00	78.1				
10.00-11.00	79.5				
11.00-12.00	78.2				
Standard		Less Than 90.0		Less Than 140.0 ^[1] , 115.0 ^[2]	
Sound Level Meter Data					
Calibrate Sheet No.: Noise R_603/22			13 November 2022		
Equipment		Brand	Model	Serial No.	Standard
Sound Level Meter (No.R11)		ACO	6236	00172038	IEC 61672
Actual Reading [dB]					
Before Adjustment			After Adjustment		
94.0			94.0		

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thiraratset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
 7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
 7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
 Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

7/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
 Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
 Mueang, Rayong 21000
 Client Name/Address : Hyundai Engineering Company
 Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (South Area)				
	November 2022				
	20-21				
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]		L _{max} [dB(A)]	
12.00-13.00	78.8	78.3	90.9		
13.00-14.00	77.5				
14.00-15.00	77.6				
15.00-16.00	76.4				
16.00-17.00	76.8				
17.00-18.00	77.3				
18.00-19.00	76.4				
19.00-20.00	76.9				
20.00-21.00	76.8	76.6	92.1		
21.00-22.00	75.9				
22.00-23.00	76.4				
23.00-00.00	75.8				
00.00-01.00	76.7				
01.00-02.00	76.4				
02.00-03.00	76.7				
03.00-04.00	76.8				
04.00-05.00	77.6	76.9	85.7		
05.00-06.00	76.8				
06.00-07.00	76.7				
07.00-08.00	77.5				
08.00-09.00	78.0				
09.00-10.00	78.4				
10.00-11.00	79.1				
11.00-12.00	79.5				
Standard		Less Than 90.0		Less Than 140.0 ^[1] , 115.0 ^[2]	
Sound Level Meter Data					
Calibrate Sheet No.: Noise R_603/22			13 November 2022		
Equipment		Brand	Model	Serial No.	Standard
Sound Level Meter (No.R11)		ACO	6236	00172038	IEC 61672
Actual Reading [dB]					
Before Adjustment			After Adjustment		
94.0			94.0		

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
 Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
 in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tharom Khruaewan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chaluchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

1/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Sampling Date : 14-21 November 2022
Date Reported : 24 November 2022

Time	Cooling Tower Area (West Area)		
	November 2022		
	14-15		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	78.4	79.1	100.5
13.00-14.00	79.8		
14.00-15.00	81.1		
15.00-16.00	79.8		
16.00-17.00	78.5		
17.00-18.00	76.2		
18.00-19.00	75.7		
19.00-20.00	76.8		
20.00-21.00	75.4	76.0	88.8
21.00-22.00	75.3		
22.00-23.00	74.5		
23.00-00.00	74.2		
00.00-01.00	74.1		
01.00-02.00	74.0		
02.00-03.00	74.3		
03.00-04.00	73.8		
04.00-05.00	73.8	74.6	101.5
05.00-06.00	73.5		
06.00-07.00	75.5		
07.00-08.00	76.8		
08.00-09.00	78.5		
09.00-10.00	77.9		
10.00-11.00	80.4		
11.00-12.00	73.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R30)	ACO	6236	00192042
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

2/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 24 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (West Area)		
	November 2022		
	15-16		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12.00-13.00	76.8	76.6	103.0
13.00-14.00	78.1		
14.00-15.00	79.3		
15.00-16.00	79.4		
16.00-17.00	80.7		
17.00-18.00	80.4		
18.00-19.00	77.1		
19.00-20.00	76.8		
20.00-21.00	76.3	77.9	84.3
21.00-22.00	76.6		
22.00-23.00	76.0		
23.00-00.00	75.7		
00.00-01.00	75.8		
01.00-02.00	74.9		
02.00-03.00	74.8		
03.00-04.00	74.6		
04.00-05.00	74.5	75.3	99.4
05.00-06.00	75.5		
06.00-07.00	76.1		
07.00-08.00	76.3		
08.00-09.00	76.9		
09.00-10.00	77.6		
10.00-11.00	78.5		
11.00-12.00	80.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R30)	ACO	6236	00192042
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)

Scientist

24 / 11 / 22

(Khemmarin Thiraratset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

3/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (West Area)		
	November 2022		
	16-17		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	75.9	76.6	104.2
13.00-14.00	74.7		
14.00-15.00	75.3		
15.00-16.00	76.8		
16.00-17.00	77.4		
17.00-18.00	78.0		
18.00-19.00	76.9		
19.00-20.00	76.8		
20.00-21.00	73.9	75.8	83.3
21.00-22.00	74.2		
22.00-23.00	74.1		
23.00-00.00	73.4		
00.00-01.00	73.2		
01.00-02.00	73.4		
02.00-03.00	73.2		
03.00-04.00	73.8		
04.00-05.00	73.0	73.8	97.9
05.00-06.00	73.2		
06.00-07.00	74.7		
07.00-08.00	75.6		
08.00-09.00	76.6		
09.00-10.00	77.0		
10.00-11.00	77.8		
11.00-12.00	73.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R30)	ACO	6236	00192042
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tharom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

4/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (West Area)		
	November 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	76.7	78.2	93.5
13.00-14.00	75.0		
14.00-15.00	79.1		
15.00-16.00	78.6		
16.00-17.00	79.2		
17.00-18.00	77.1		
18.00-19.00	76.0		
19.00-20.00	74.5		
20.00-21.00	75.7	76.0	83.8
21.00-22.00	74.4		
22.00-23.00	74.2		
23.00-00.00	74.0		
00.00-01.00	74.7		
01.00-02.00	74.0		
02.00-03.00	73.8		
03.00-04.00	73.7		
04.00-05.00	73.9	74.1	102.6
05.00-06.00	73.6		
06.00-07.00	74.1		
07.00-08.00	74.6		
08.00-09.00	75.9		
09.00-10.00	79.1		
10.00-11.00	79.6		
11.00-12.00	79.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R30)	ACO	6236	00192042
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72 Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

5/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (West Area)		
	November 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	77.5	78.1	97.6
13.00-14.00	76.1		
14.00-15.00	78.1		
15.00-16.00	79.9		
16.00-17.00	80.7		
17.00-18.00	79.7		
18.00-19.00	78.2		
19.00-20.00	76.6		
20.00-21.00	76.4	77.7	80.0
21.00-22.00	76.1		
22.00-23.00	75.7		
23.00-00.00	74.3		
00.00-01.00	73.8		
01.00-02.00	73.6		
02.00-03.00	73.2		
03.00-04.00	73.2		
04.00-05.00	73.0	73.7	96.2
05.00-06.00	73.5		
06.00-07.00	74.4		
07.00-08.00	74.6		
08.00-09.00	74.9		
09.00-10.00	76.8		
10.00-11.00	79.1		
11.00-12.00	79.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R30)	ACO	6236	00192042
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompet, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

6/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (West Area)		
	November 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	73.9	77.3	98.6
13.00-14.00	74.7		
14.00-15.00	73.5		
15.00-16.00	75.3		
16.00-17.00	75.5		
17.00-18.00	76.2		
18.00-19.00	75.2		
19.00-20.00	74.2		
20.00-21.00	74.1	74.7	84.4
21.00-22.00	73.7		
22.00-23.00	73.7		
23.00-00.00	74.3		
00.00-01.00	74.2		
01.00-02.00	73.8		
02.00-03.00	74.2		
03.00-04.00	74.2		
04.00-05.00	73.9	74.2	95.4
05.00-06.00	74.2		
06.00-07.00	74.2		
07.00-08.00	75.0		
08.00-09.00	77.7		
09.00-10.00	79.1		
10.00-11.00	78.5		
11.00-12.00	80.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R30)	ACO	6236	00192042
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

7/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (West Area)		
	November 2022		
	20-21		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	74.7	78.6	103.1
13.00-14.00	77.6		
14.00-15.00	76.8		
15.00-16.00	78.2		
16.00-17.00	79.2		
17.00-18.00	80.3		
18.00-19.00	76.3		
19.00-20.00	76.1		
20.00-21.00	76.1	77.3	72.5
21.00-22.00	76.0		
22.00-23.00	76.0		
23.00-00.00	75.5		
00.00-01.00	75.1		
01.00-02.00	75.0		
02.00-03.00	75.2		
03.00-04.00	74.9		
04.00-05.00	74.8	75.2	93.6
05.00-06.00	74.9		
06.00-07.00	75.3		
07.00-08.00	76.0		
08.00-09.00	76.2		
09.00-10.00	78.1		
10.00-11.00	81.4		
11.00-12.00	81.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R30)	ACO	6236	00192042
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruaewat)

Scientist

24 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

1/7

RY0274/11/85

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (North Area)		
	November 2022		
	14-15		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	75.1	75.1	100.0
13.00-14.00	73.7		
14.00-15.00	71.0		
15.00-16.00	71.3		
16.00-17.00	71.6		
17.00-18.00	73.5		
18.00-19.00	72.7		
19.00-20.00	71.8		
20.00-21.00	73.9	72.8	101.5
21.00-22.00	71.7		
22.00-23.00	72.8		
23.00-00.00	73.8		
00.00-01.00	73.4		
01.00-02.00	72.8		
02.00-03.00	72.4		
03.00-04.00	71.8		
04.00-05.00	72.1	73.3	99.9
05.00-06.00	73.9		
06.00-07.00	74.2		
07.00-08.00	75.0		
08.00-09.00	76.8		
09.00-10.00	74.5		
10.00-11.00	77.9		
11.00-12.00	76.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R33)	ACO	6236	00192045
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruaswan)

Scientist

24 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

2/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 24 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (North Area)		
	November 2022		
	15-16		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	75.3	74.7	92.1
13.00-14.00	74.5		
14.00-15.00	74.3		
15.00-16.00	75.4		
16.00-17.00	76.1		
17.00-18.00	73.5		
18.00-19.00	75.4		
19.00-20.00	74.9		
20.00-21.00	75.3	74.5	89.7
21.00-22.00	75.1		
22.00-23.00	72.6		
23.00-00.00	71.7		
00.00-01.00	71.0		
01.00-02.00	73.0		
02.00-03.00	76.5		
03.00-04.00	74.2		
04.00-05.00	73.2	73.9	98.8
05.00-06.00	73.1		
06.00-07.00	73.8		
07.00-08.00	74.6		
08.00-09.00	75.1		
09.00-10.00	74.1		
10.00-11.00	74.7		
11.00-12.00	73.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R33)	ACO	6236	00192045
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

3/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Sampling Date : 14-21 November 2022
Date Reported : 24 November 2022

Time	Cooling Tower Area (North Area)		
	November 2022		
	16-17		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	76.1	74.6	94.8
13.00-14.00	75.1		
14.00-15.00	73.8		
15.00-16.00	72.4		
16.00-17.00	72.6		
17.00-18.00	71.5		
18.00-19.00	72.3		
19.00-20.00	71.0		
20.00-21.00	73.2	72.3	89.0
21.00-22.00	72.8		
22.00-23.00	72.6		
23.00-00.00	71.6		
00.00-01.00	71.5		
01.00-02.00	72.5		
02.00-03.00	73.7		
03.00-04.00	73.6		
04.00-05.00	73.3	73.3	99.4
05.00-06.00	73.7		
06.00-07.00	74.2		
07.00-08.00	73.3		
08.00-09.00	74.7		
09.00-10.00	73.7		
10.00-11.00	74.0		
11.00-12.00	75.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R33)	ACO	6236	00192045
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

4/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 24 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (North Area)		
	November 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	72.4	74.3	98.1
13.00-14.00	72.2		
14.00-15.00	72.1		
15.00-16.00	73.1		
16.00-17.00	71.8		
17.00-18.00	71.2		
18.00-19.00	73.6		
19.00-20.00	71.3		
20.00-21.00	73.3	72.7	95.7
21.00-22.00	73.0		
22.00-23.00	73.8		
23.00-00.00	72.7		
00.00-01.00	71.7		
01.00-02.00	71.4		
02.00-03.00	71.0		
03.00-04.00	70.9		
04.00-05.00	71.0	71.6	96.6
05.00-06.00	71.0		
06.00-07.00	72.1		
07.00-08.00	73.3		
08.00-09.00	74.8		
09.00-10.00	74.2		
10.00-11.00	75.7		
11.00-12.00	76.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R33)	ACO	6236	00192045
Actual Reading [dB]		Standard	
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

5/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen,
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Sampling Date : 14-21 November 2022
Date Reported : 24 November 2022

Time	Cooling Tower Area (North Area)		
	November 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	73.2	74.2	99.6
13.00-14.00	72.4		
14.00-15.00	73.5		
15.00-16.00	75.1		
16.00-17.00	74.4		
17.00-18.00	73.1		
18.00-19.00	72.2		
19.00-20.00	74.2		
20.00-21.00	73.7	73.6	97.8
21.00-22.00	74.7		
22.00-23.00	72.5		
23.00-00.00	73.6		
00.00-01.00	74.0		
01.00-02.00	73.4		
02.00-03.00	73.3		
03.00-04.00	72.9		
04.00-05.00	73.0	73.4	98.2
05.00-06.00	73.0		
06.00-07.00	74.0		
07.00-08.00	73.3		
08.00-09.00	73.1		
09.00-10.00	74.0		
10.00-11.00	75.7		
11.00-12.00	75.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R33)	ACO	6236	00192045
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

6/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 24 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (North Area)		
	November 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	74.9	74.3	93.8
13.00-14.00	73.9		
14.00-15.00	72.6		
15.00-16.00	72.2		
16.00-17.00	73.3		
17.00-18.00	73.1		
18.00-19.00	72.7		
19.00-20.00	74.2		
20.00-21.00	72.6	73.0	79.9
21.00-22.00	72.4		
22.00-23.00	72.3		
23.00-00.00	72.8		
00.00-01.00	73.2		
01.00-02.00	73.0		
02.00-03.00	72.8		
03.00-04.00	73.1		
04.00-05.00	73.0	73.1	101.1
05.00-06.00	72.8		
06.00-07.00	73.3		
07.00-08.00	73.6		
08.00-09.00	74.1		
09.00-10.00	74.0		
10.00-11.00	75.2		
11.00-12.00	76.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_603/22		13 November 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R33)	ACO	6236	00192045
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment, Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

7/7

RY0274/11/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 14-21 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 24 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area (North Area)			
	November 2022			
	20-21			
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]		L _{max} [dB(A)]
12.00-13.00	74.7	74.7		101.5
13.00-14.00	74.5			
14.00-15.00	73.7			
15.00-16.00	74.4			
16.00-17.00	72.2			
17.00-18.00	72.9			
18.00-19.00	73.2			
19.00-20.00	72.4			
20.00-21.00	71.6	72.3		97.9
21.00-22.00	72.0			
22.00-23.00	71.2			
23.00-00.00	72.4			
00.00-01.00	71.5			
01.00-02.00	71.1			
02.00-03.00	71.8			
03.00-04.00	71.4			
04.00-05.00	71.2	71.4		98.4
05.00-06.00	70.8			
06.00-07.00	71.3			
07.00-08.00	72.0			
08.00-09.00	73.2			
09.00-10.00	74.7			
10.00-11.00	75.5			
11.00-12.00	75.9			
Standard		Less Than 90.0		Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data				
Calibrate Sheet No.: Noise R_603/22			13 November 2022	
Equipment	Brand	Model	Serial No.	Standard
Sound Level Meter (No.R33)	ACO	6236	00192045	IEC 61672
Actual Reading [dB]				
Before Adjustment			After Adjustment	
94.0			94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

24 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

24 / 11 / 22

Diesel Hydrotreating Unit



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscon.com, www.spscon.com

1/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (East Area)		
	October - November 2022		
	27-28		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:30-12:30	74.9	76.1	93.3
12:30-13:30	75.8		
13:30-14:30	76.2		
14:30-15:30	74.6		
15:30-16:30	75.7		
16:30-17:30	75.9		
17:30-18:30	77.2		
18:30-19:30	77.5	76.3	89.2
19:30-20:30	75.8		
20:30-21:30	74.2		
21:30-22:30	75.8		
22:30-23:30	77.5		
23:30-00:30	76.3		
00:30-01:30	74.5		
01:30-02:30	73.8	75.9	90.0
02:30-03:30	75.0		
03:30-04:30	76.8		
04:30-05:30	77.3		
05:30-06:30	76.9		
06:30-07:30	75.2		
07:30-08:30	76.1		
08:30-09:30	75.5		
09:30-10:30	77.9		
10:30-11:30	76.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R31)	ACO	6236	00192043
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment, Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

2/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (East Area)		
	October - November 2022		
	28-29		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:30-12:30	73.6	76.2	90.7
12:30-13:30	74.9		
13:30-14:30	75.2		
14:30-15:30	76.4		
15:30-16:30	75.2		
16:30-17:30	74.3		
17:30-18:30	74.9		
18:30-19:30	72.0		
19:30-20:30	71.5	73.3	89.2
20:30-21:30	71.1		
21:30-22:30	73.6		
22:30-23:30	72.1		
23:30-00:30	71.0		
00:30-01:30	72.0		
01:30-02:30	73.9		
02:30-03:30	75.4		
03:30-04:30	76.7	74.5	96.8
04:30-05:30	75.0		
05:30-06:30	75.2		
06:30-07:30	74.2		
07:30-08:30	78.5		
08:30-09:30	76.9		
09:30-10:30	75.1		
10:30-11:30	77.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R31)	ACO	6236	00192043
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol. Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

3/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October – 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (East Area)		
	October – November 2022		
	29-30		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:30-12:30	74.8	80.2	89.4
12:30-13:30	75.8		
13:30-14:30	74.6		
14:30-15:30	76.5		
15:30-16:30	76.2		
16:30-17:30	74.8		
17:30-18:30	73.0		
18:30-19:30	71.4		
19:30-20:30	71.9	73.6	85.0
20:30-21:30	72.6		
21:30-22:30	72.8		
22:30-23:30	73.7		
23:30-00:30	72.9		
00:30-01:30	70.9		
01:30-02:30	73.5		
02:30-03:30	72.2		
03:30-04:30	73.2	74.2	95.2
04:30-05:30	75.0		
05:30-06:30	75.5		
06:30-07:30	77.0		
07:30-08:30	78.7		
08:30-09:30	83.4		
09:30-10:30	81.9		
10:30-11:30	83.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R31)	ACO	6236	00192043
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)

Scientist
17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor
17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol. Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

4/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (East Area)		
	October - November 2022		
	30-31		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:30-12:30	76.9	77.6	97.3
12:30-13:30	78.5		
13:30-14:30	78.4		
14:30-15:30	78.4		
15:30-16:30	76.0		
16:30-17:30	76.7		
17:30-18:30	75.7		
18:30-19:30	75.4		
19:30-20:30	75.0	75.6	85.7
20:30-21:30	74.7		
21:30-22:30	75.0		
22:30-23:30	75.5		
23:30-00:30	73.4		
00:30-01:30	73.5		
01:30-02:30	74.3		
02:30-03:30	72.3		
03:30-04:30	73.0	74.3	96.8
04:30-05:30	74.9		
05:30-06:30	74.3		
06:30-07:30	76.8		
07:30-08:30	78.5		
08:30-09:30	75.7		
09:30-10:30	77.0		
10:30-11:30	76.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R31)	ACO	6236	00192043
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

5/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October – 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (East Area)		
	October – November 2022		
	31-01		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:30–12:30	76.6	78.1	94.8
12:30–13:30	75.2		
13:30–14:30	78.6		
14:30–15:30	80.2		
15:30–16:30	79.2		
16:30–17:30	77.0		
17:30–18:30	76.2		
18:30–19:30	73.1		
19:30–20:30	72.5	75.7	82.7
20:30–21:30	73.4		
21:30–22:30	74.1		
22:30–23:30	75.4		
23:30–00:30	72.5		
00:30–01:30	73.5		
01:30–02:30	73.0		
02:30–03:30	74.7		
03:30–04:30	72.5	74.0	93.7
04:30–05:30	71.3		
05:30–06:30	75.5		
06:30–07:30	76.5		
07:30–08:30	76.9		
08:30–09:30	78.9		
09:30–10:30	78.3		
10:30–11:30	78.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R31)	ACO	6236	00192043
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment, Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

6/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (East Area)		
	October - November 2022		
	01-02		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:30-12:30	76.5	77.4	86.7
12:30-13:30	77.7		
13:30-14:30	78.8		
14:30-15:30	80.2		
15:30-16:30	79.2		
16:30-17:30	78.1		
17:30-18:30	78.1		
18:30-19:30	76.1	77.2	79.8
19:30-20:30	77.3		
20:30-21:30	75.7		
21:30-22:30	76.5		
22:30-23:30	74.5		
23:30-00:30	73.5		
00:30-01:30	74.7		
01:30-02:30	76.5	73.9	88.8
02:30-03:30	73.9		
03:30-04:30	74.0		
04:30-05:30	72.2		
05:30-06:30	71.3		
06:30-07:30	73.5		
07:30-08:30	74.5		
08:30-09:30	76.8		
09:30-10:30	75.7		
10:30-11:30	75.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R31)	ACO	6236	00192043
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)

Scientist
17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor
17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

7/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (East Area)		
	October - November 2022		
	02-03		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:30-12:30	77.4	76.5	90.9
12:30-13:30	76.5		
13:30-14:30	76.0		
14:30-15:30	75.7		
15:30-16:30	75.6		
16:30-17:30	77.6		
17:30-18:30	76.0		
18:30-19:30	75.1		
19:30-20:30	74.1	75.6	82.1
20:30-21:30	75.8		
21:30-22:30	75.4		
22:30-23:30	74.7		
23:30-00:30	72.7		
00:30-01:30	73.0		
01:30-02:30	74.6		
02:30-03:30	73.9		
03:30-04:30	74.8	74.8	89.5
04:30-05:30	76.8		
05:30-06:30	76.6		
06:30-07:30	74.6		
07:30-08:30	75.5		
08:30-09:30	76.9		
09:30-10:30	77.1		
10:30-11:30	76.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R31)	ACO	6236	00192043
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization, Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

1/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 17 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (South Area)		
	October - November 2022		
	27-28		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:30-12:30	79.6	78.0	96.1
12:30-13:30	78.9		
13:30-14:30	78.3		
14:30-15:30	76.1		
15:30-16:30	77.4		
16:30-17:30	80.6		
17:30-18:30	78.9		
18:30-19:30	76.0		
19:30-20:30	75.5	77.0	91.7
20:30-21:30	76.1		
21:30-22:30	73.7		
22:30-23:30	72.3		
23:30-00:30	73.8		
00:30-01:30	75.3		
01:30-02:30	76.8		
02:30-03:30	74.0		
03:30-04:30	74.7	75.5	94.5
04:30-05:30	76.3		
05:30-06:30	75.1		
06:30-07:30	76.9		
07:30-08:30	77.7		
08:30-09:30	76.0		
09:30-10:30	76.2		
10:30-11:30	79.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R08)	ACO	6236	00152082
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

2/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (South Area)		
	October - November 2022		
	28-29		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:30-12:30	79.8	80.6	95.6
12:30-13:30	82.6		
13:30-14:30	83.7		
14:30-15:30	79.6		
15:30-16:30	75.9		
16:30-17:30	77.6		
17:30-18:30	75.4		
18:30-19:30	74.3		
19:30-20:30	74.8	76.3	91.1
20:30-21:30	75.9		
21:30-22:30	76.2		
22:30-23:30	78.4		
23:30-00:30	75.5		
00:30-01:30	75.3		
01:30-02:30	76.6		
02:30-03:30	74.5		
03:30-04:30	74.0	75.7	96.5
04:30-05:30	75.4		
05:30-06:30	76.2		
06:30-07:30	77.2		
07:30-08:30	76.7		
08:30-09:30	78.8		
09:30-10:30	79.6		
10:30-11:30	79.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R08)	ACO	6236	00152082
		Standard	IEC 61672
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscon.com., www.spscon.com

3/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (South Area)		
	October - November 2022		
	29-30		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:30-12:30	78.8	80.3	97.9
12:30-13:30	81.6		
13:30-14:30	81.7		
14:30-15:30	82.8		
15:30-16:30	83.9		
16:30-17:30	82.9		
17:30-18:30	82.4		
18:30-19:30	79.0		
19:30-20:30	79.2	80.5	89.8
20:30-21:30	77.2		
21:30-22:30	76.3		
22:30-23:30	75.7		
23:30-00:30	75.6		
00:30-01:30	75.8		
01:30-02:30	75.1		
02:30-03:30	75.4		
03:30-04:30	75.0	75.4	100.1
04:30-05:30	75.0		
05:30-06:30	75.3		
06:30-07:30	75.7		
07:30-08:30	76.7		
08:30-09:30	78.1		
09:30-10:30	79.9		
10:30-11:30	79.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R08)	ACO	6236	00152082
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

4/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (South Area)			
	October – November 2022			
	30-31			
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]	
11:30-12:30	77.9	77.9	88.7	
12:30-13:30	77.3			
13:30-14:30	76.7			
14:30-15:30	78.2			
15:30-16:30	80.2			
16:30-17:30	80.4			
17:30-18:30	80.6			
18:30-19:30	79.1			
19:30-20:30	78.8	78.7	88.1	
20:30-21:30	76.6			
21:30-22:30	74.6			
22:30-23:30	74.4			
23:30-00:30	75.3			
00:30-01:30	74.5			
01:30-02:30	74.1			
02:30-03:30	73.4			
03:30-04:30	73.6	74.5	90.5	
04:30-05:30	74.8			
05:30-06:30	74.9			
06:30-07:30	75.1			
07:30-08:30	76.8			
08:30-09:30	78.0			
09:30-10:30	78.7			
10:30-11:30	79.0			
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]	
Sound Level Meter Data				
Calibrate Sheet No.: Noise R_520/22		26 October 2022		
Equipment	Brand	Model	Serial No.	Standard
Sound Level Meter (No.R08)	ACO	6236	00152082	IEC 61672
Actual Reading [dB]				
Before Adjustment		After Adjustment		
94.1		94.0		

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

5/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 17 November 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (South Area)		
	October - November 2022		
	31-01		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:30-12:30	80.6	81.3	101.4
12:30-13:30	81.3		
13:30-14:30	82.1		
14:30-15:30	82.5		
15:30-16:30	83.9		
16:30-17:30	83.2		
17:30-18:30	81.3		
18:30-19:30	76.6		
19:30-20:30	75.8	79.9	97.1
20:30-21:30	76.6		
21:30-22:30	75.4		
22:30-23:30	75.8		
23:30-00:30	74.9		
00:30-01:30	75.0		
01:30-02:30	75.4		
02:30-03:30	76.0		
03:30-04:30	77.0	78.1	94.3
04:30-05:30	79.0		
05:30-06:30	81.4		
06:30-07:30	80.7		
07:30-08:30	81.8		
08:30-09:30	80.2		
09:30-10:30	80.8		
10:30-11:30	80.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R08)	ACO	6236	00152082
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruaeawar)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

6/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (South Area)		
	October - November 2022		
	01-02		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:30-12:30	80.2	80.4	96.1
12:30-13:30	81.2		
13:30-14:30	81.7		
14:30-15:30	81.3		
15:30-16:30	81.5		
16:30-17:30	80.5		
17:30-18:30	79.6		
18:30-19:30	78.2		
19:30-20:30	76.7	78.7	85.1
20:30-21:30	77.0		
21:30-22:30	76.9		
22:30-23:30	75.9		
23:30-00:30	75.3		
00:30-01:30	76.3		
01:30-02:30	75.7		
02:30-03:30	75.6		
03:30-04:30	76.6	75.8	93.8
04:30-05:30	75.2		
05:30-06:30	75.8		
06:30-07:30	76.1		
07:30-08:30	77.0		
08:30-09:30	79.2		
09:30-10:30	80.3		
10:30-11:30	80.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R08)	ACO	6236	00152082
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization, Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist
17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor
17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

7/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (South Area)		
	October - November 2022		
	02-03		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:30-12:30	79.4	78.4	97.2
12:30-13:30	78.9		
13:30-14:30	80.0		
14:30-15:30	80.3		
15:30-16:30	80.4		
16:30-17:30	79.1		
17:30-18:30	76.2		
18:30-19:30	77.2		
19:30-20:30	75.4	77.5	88.9
20:30-21:30	75.7		
21:30-22:30	76.7		
22:30-23:30	76.3		
23:30-00:30	76.0		
00:30-01:30	75.6		
01:30-02:30	75.1		
02:30-03:30	74.7		
03:30-04:30	73.7	75.4	93.8
04:30-05:30	74.8		
05:30-06:30	76.5		
06:30-07:30	76.1		
07:30-08:30	77.2		
08:30-09:30	76.7		
09:30-10:30	76.4		
10:30-11:30	76.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R08)	ACO	6236	00152082
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, ACO, Model 2127, S/N 130006

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruaewan)

Scientist

17 / 11 / 22

(Khemmarin Thirathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

1/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (West Area)		
	October - November 2022		
	27-28		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	77.2	78.2	97.0
13:00-14:00	78.8		
14:00-15:00	78.4		
15:00-16:00	79.9		
16:00-17:00	78.0		
17:00-18:00	76.3		
18:00-19:00	75.2		
19:00-20:00	75.3		
20:00-21:00	75.1	76.7	93.1
21:00-22:00	74.8		
22:00-23:00	75.6		
23:00-00:00	73.6		
00:00-01:00	72.6		
01:00-02:00	74.9		
02:00-03:00	74.1		
03:00-04:00	74.4		
04:00-05:00	75.9	74.6	95.1
05:00-06:00	74.6		
06:00-07:00	75.6		
07:00-08:00	77.2		
08:00-09:00	77.8		
09:00-10:00	78.6		
10:00-11:00	77.9		
11:00-12:00	79.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

2/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (West Area)		
	October - November 2022		
	28-29		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	80.1	79.0	93.4
13:00-14:00	81.8		
14:00-15:00	82.0		
15:00-16:00	83.2		
16:00-17:00	83.3		
17:00-18:00	81.3		
18:00-19:00	79.2		
19:00-20:00	77.3		
20:00-21:00	76.5	80.2	86.5
21:00-22:00	76.6		
22:00-23:00	77.3		
23:00-00:00	76.2		
00:00-01:00	76.8		
01:00-02:00	75.0		
02:00-03:00	74.5		
03:00-04:00	76.6		
04:00-05:00	75.7	76.2	92.0
05:00-06:00	76.4		
06:00-07:00	77.5		
07:00-08:00	76.5		
08:00-09:00	76.8		
09:00-10:00	75.9		
10:00-11:00	76.9		
11:00-12:00	76.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2002

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

3/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (West Area)		
	October - November 2022		
	29-30		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	82.2	80.7	99.1
13:00-14:00	81.4		
14:00-15:00	79.9		
15:00-16:00	79.4		
16:00-17:00	80.7		
17:00-18:00	79.5		
18:00-19:00	79.2		
19:00-20:00	78.9		
20:00-21:00	77.7	76.7	86.5
21:00-22:00	76.4		
22:00-23:00	75.7		
23:00-00:00	76.2		
00:00-01:00	76.9		
01:00-02:00	77.2		
02:00-03:00	73.4		
03:00-04:00	75.3		
04:00-05:00	75.7	75.7	97.4
05:00-06:00	74.0		
06:00-07:00	75.8		
07:00-08:00	76.3		
08:00-09:00	77.0		
09:00-10:00	79.5		
10:00-11:00	81.1		
11:00-12:00	83.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
		Standard	IEC 61672
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

4/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October – 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (West Area)		
	October – November 2022		
	30-31		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12:00-13:00	82.5	79.9	99.1
13:00-14:00	81.6		
14:00-15:00	82.1		
15:00-16:00	81.8		
16:00-17:00	81.3		
17:00-18:00	83.2		
18:00-19:00	81.6		
19:00-20:00	81.7		
20:00-21:00	79.1	80.8	86.9
21:00-22:00	77.7		
22:00-23:00	76.1		
23:00-00:00	76.8		
00:00-01:00	76.7		
01:00-02:00	76.9		
02:00-03:00	76.7		
03:00-04:00	75.4		
04:00-05:00	75.2	76.0	96.1
05:00-06:00	74.7		
06:00-07:00	75.0		
07:00-08:00	75.9		
08:00-09:00	76.7		
09:00-10:00	78.8		
10:00-11:00	77.2		
11:00-12:00	78.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72. Fax : (662) 513-4221. E-mail : sale@spscon.com, www.spscon.com

5/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (West Area)		
	October - November 2022		
	31-01		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12:00-13:00	83.7	81.7	94.7
13:00-14:00	83.2		
14:00-15:00	81.7		
15:00-16:00	82.3		
16:00-17:00	82.4		
17:00-18:00	81.1		
18:00-19:00	81.2		
19:00-20:00	79.7	80.7	90.8
20:00-21:00	79.5		
21:00-22:00	78.7		
22:00-23:00	78.9		
23:00-00:00	77.8		
00:00-01:00	76.8		
01:00-02:00	77.1		
02:00-03:00	75.6	76.7	97.1
03:00-04:00	75.8		
04:00-05:00	76.8		
05:00-06:00	76.6		
06:00-07:00	76.9		
07:00-08:00	77.4		
08:00-09:00	78.9		
09:00-10:00	81.4		
10:00-11:00	80.8		
11:00-12:00	82.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruewan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

6/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (West Area)		
	October - November 2022		
	01-02		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12:00-13:00	80.6	79.9	97.4
13:00-14:00	81.6		
14:00-15:00	83.3		
15:00-16:00	82.2		
16:00-17:00	79.9		
17:00-18:00	79.7		
18:00-19:00	78.7		
19:00-20:00	78.9		
20:00-21:00	76.4	78.9	82.8
21:00-22:00	75.9		
22:00-23:00	74.3		
23:00-00:00	75.6		
00:00-01:00	76.9		
01:00-02:00	77.2		
02:00-03:00	76.9		
03:00-04:00	74.7		
04:00-05:00	75.5	76.3	96.9
05:00-06:00	75.3		
06:00-07:00	77.5		
07:00-08:00	78.1		
08:00-09:00	77.4		
09:00-10:00	77.1		
10:00-11:00	78.3		
11:00-12:00	78.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22

RS/H025/22/OCT-NOV



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

7/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (West Area)		
	October - November 2022		
	02-03		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12:00-13:00	82.1	80.1	95.7
13:00-14:00	81.3		
14:00-15:00	79.8		
15:00-16:00	78.3		
16:00-17:00	80.3		
17:00-18:00	81.0		
18:00-19:00	79.3		
19:00-20:00	78.7		
20:00-21:00	77.6	78.6	87.5
21:00-22:00	75.2		
22:00-23:00	74.8		
23:00-00:00	75.4		
00:00-01:00	74.4		
01:00-02:00	73.5		
02:00-03:00	74.2		
03:00-04:00	73.3		
04:00-05:00	75.5	75.0	96.4
05:00-06:00	75.6		
06:00-07:00	76.8		
07:00-08:00	77.9		
08:00-09:00	78.6		
09:00-10:00	79.7		
10:00-11:00	79.2		
11:00-12:00	80.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R11)	ACO	6236	00172038
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

1/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (North Area)		
	October - November 2022		
	27-28		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	80.2	78.6	92.8
13:00-14:00	72.8		
14:00-15:00	82.4		
15:00-16:00	82.3		
16:00-17:00	82.4		
17:00-18:00	83.3		
18:00-19:00	81.6		
19:00-20:00	78.2		
20:00-21:00	75.0	80.5	82.4
21:00-22:00	75.3		
22:00-23:00	77.9		
23:00-00:00	80.9		
00:00-01:00	71.5		
01:00-02:00	71.0		
02:00-03:00	75.4		
03:00-04:00	81.0		
04:00-05:00	82.4	81.1	91.5
05:00-06:00	84.2		
06:00-07:00	84.3		
07:00-08:00	74.4		
08:00-09:00	72.1		
09:00-10:00	79.7		
10:00-11:00	78.9		
11:00-12:00	77.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R02)	ACO	6236	00132029
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2548 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist
17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor
17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

2/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (North Area)			
	October – November 2022			
	28-29			
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]	
12:00–13:00	87.3	85.8	95.2	
13:00–14:00	92.7			
14:00–15:00	85.5			
15:00–16:00	78.7			
16:00–17:00	77.8			
17:00–18:00	78.0			
18:00–19:00	82.2			
19:00–20:00	83.9			
20:00–21:00	82.8	82.1	91.9	
21:00–22:00	84.2			
22:00–23:00	83.9			
23:00–00:00	82.9			
00:00–01:00	83.9			
01:00–02:00	82.9			
02:00–03:00	83.9			
03:00–04:00	82.1			
04:00–05:00	82.7	83.0	95.0	
05:00–06:00	83.2			
06:00–07:00	81.7			
07:00–08:00	78.5			
08:00–09:00	75.5			
09:00–10:00	75.1			
10:00–11:00	77.6			
11:00–12:00	81.1			
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]	
Sound Level Meter Data				
Calibrate Sheet No.: Noise R_520/22		26 October 2022		
Equipment	Brand	Model	Serial No.	Standard
Sound Level Meter (No.R02)	ACO	6236	00132029	IEC 61672
Actual Reading [dB]				
Before Adjustment		After Adjustment		
94.0		94.0		

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard⁽¹⁾ = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard⁽²⁾ = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

3/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (North Area)		
	October - November 2022		
	29-30		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	85.7	84.2	103.4
13:00-14:00	88.3		
14:00-15:00	86.3		
15:00-16:00	81.1		
16:00-17:00	82.8		
17:00-18:00	81.4		
18:00-19:00	82.3		
19:00-20:00	78.8		
20:00-21:00	74.3	79.9	92.3
21:00-22:00	75.8		
22:00-23:00	74.1		
23:00-00:00	77.6		
00:00-01:00	76.8		
01:00-02:00	72.4		
02:00-03:00	73.0		
03:00-04:00	74.3		
04:00-05:00	81.0	79.5	99.3
05:00-06:00	82.6		
06:00-07:00	83.9		
07:00-08:00	80.7		
08:00-09:00	70.8		
09:00-10:00	74.2		
10:00-11:00	83.2		
11:00-12:00	84.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R02)	ACO	6236	00132029
Standard			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruaewan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

4/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (North Area)		
	October - November 2022		
	30-31		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12:00-13:00	81.4	85.0	96.8
13:00-14:00	81.7		
14:00-15:00	81.8		
15:00-16:00	83.0		
16:00-17:00	81.8		
17:00-18:00	80.7		
18:00-19:00	82.0		
19:00-20:00	81.4		
20:00-21:00	73.5	80.2	91.5
21:00-22:00	72.6		
22:00-23:00	74.3		
23:00-00:00	80.8		
00:00-01:00	79.9		
01:00-02:00	75.8		
02:00-03:00	76.6		
03:00-04:00	79.4		
04:00-05:00	80.6	80.6	92.7
05:00-06:00	82.7		
06:00-07:00	83.7		
07:00-08:00	83.3		
08:00-09:00	82.4		
09:00-10:00	85.6		
10:00-11:00	86.5		
11:00-12:00	89.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R02)	ACO	6236	00132029
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaser)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

5/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (North Area)		
	October - November 2022		
	31-01		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	81.3	82.6	98.6
13:00-14:00	80.9		
14:00-15:00	82.3		
15:00-16:00	83.9		
16:00-17:00	84.3		
17:00-18:00	83.3		
18:00-19:00	85.0		
19:00-20:00	85.3		
20:00-21:00	79.0	82.9	87.1
21:00-22:00	75.9		
22:00-23:00	77.2		
23:00-00:00	86.2		
00:00-01:00	85.0		
01:00-02:00	71.5		
02:00-03:00	74.8		
03:00-04:00	87.2		
04:00-05:00	84.7	84.1	89.9
05:00-06:00	83.3		
06:00-07:00	83.5		
07:00-08:00	85.0		
08:00-09:00	73.0		
09:00-10:00	79.6		
10:00-11:00	84.1		
11:00-12:00	85.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R02)	ACO	6236	00132029
		Standard	
		IEC 61672	
		Actual Reading [dB]	
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment, Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2005

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

6/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (North Area)		
	October - November 2022		
	01-02		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	80.9	82.4	94.1
13:00-14:00	82.8		
14:00-15:00	82.5		
15:00-16:00	83.4		
16:00-17:00	84.2		
17:00-18:00	82.9		
18:00-19:00	82.7		
19:00-20:00	81.4		
20:00-21:00	79.6	82.1	78.0
21:00-22:00	78.8		
22:00-23:00	80.8		
23:00-00:00	79.3		
00:00-01:00	77.8		
01:00-02:00	71.9		
02:00-03:00	76.5		
03:00-04:00	82.1		
04:00-05:00	84.5	81.3	95.6
05:00-06:00	83.3		
06:00-07:00	83.5		
07:00-08:00	81.8		
08:00-09:00	83.7		
09:00-10:00	83.2		
10:00-11:00	81.3		
11:00-12:00	81.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R02)	ACO	6236	00132029
Standard			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations, Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol. Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com, www.spscon.com

7/7

RY0167/10/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 27 October - 3 November 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 17 November 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit Area (North Area)		
	October - November 2022		
	02-03		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	83.9	81.7	102.8
13:00-14:00	81.0		
14:00-15:00	82.7		
15:00-16:00	83.0		
16:00-17:00	84.4		
17:00-18:00	81.9		
18:00-19:00	79.3		
19:00-20:00	76.2		
20:00-21:00	78.8	80.7	93.2
21:00-22:00	78.6		
22:00-23:00	75.6		
23:00-00:00	77.1		
00:00-01:00	74.4		
01:00-02:00	76.2		
02:00-03:00	78.8		
03:00-04:00	84.9		
04:00-05:00	82.9	81.0	98.8
05:00-06:00	82.7		
06:00-07:00	81.2		
07:00-08:00	82.6		
08:00-09:00	81.1		
09:00-10:00	80.4		
10:00-11:00	80.6		
11:00-12:00	79.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_520/22		26 October 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R02)	ACO	6236	00132029
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

This Report is not Included in the Results of Measurement and Analysis Certified in Accordance with the Ministerial Regulations,

Registration and Service Authorization. Occupational Health and Work Environment, B.E. 2564 (2021)

Standard^[1] = Safety Protection Measures in Industrial Plant Operation Concerning Working Environment,
Notification of the Ministry of Industry, B.E. 2546 (2003)

Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
in Relation to Heat, Light and Noise, Regulation of the Ministry of Labour, B.E. 2559 (2016)

Sampling Method = Sound Level Meter

Acoustic Calibrator, RION, Model NC-73, S/N. 10727909, IEC 60942-2003

Reported results refer to measurement time only.

Do not copy partial of this measurement report without official approval.

(Tinarom Khruawan)

Scientist

17 / 11 / 22

(Khemmarin Thirarathaset)

Technical Supervisor

17 / 11 / 22