

ภาคผนวกที่ 3

ผลการวิเคราะห์คุณภาพสิ่งแวดล้อม

คุณภาพอากาศ



Ref. No. AR251(1)-AR251(7)/04/22

Report No. 2204/446

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 : Pongsiri Khunhiran
S.P.S. Consulting Service Co., Ltd.

Sampling Date : 5-12 April 2022
Date Received : 12 April 2022
Date of Analysis : 12-27 April 2022
Date Reported : 29 April 2022

Parameter	Sampling Method	Analytical Method	Construction of a Production Control Building Area							Standard
			April 2022							
			5-6	6-7	7-8	8-9	9-10	10-11	11-12	
Total Suspended Particulate (mg/m ³)	High Volume Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix B)	0.072	0.050	0.083	0.080	0.106	0.045	0.089	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)	0.030	0.021	0.040	0.042	0.054	0.024	0.048	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.

(Khemmarin Thirarathaset)

Laboratory Operator

29 / 04 / 22

(Atchara Chaiyaw)

Laboratory Supervisor

29 / 04 / 22



Ref. No. AR553(1)-AR553(7)/05/22

Report No. 2205/725

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 : Asadawut Nirapai
S.P.S. Consulting Service Co., Ltd.

Sampling Date : 17-24 May 2022
Date Received : 26 May 2022
Date of Analysis : 26 May-1 June 2022
Date Reported : 2 June 2022

Parameter	Sampling Method	Analytical Method	Cooling Tower Area							Standard
			May 2022							
			17-18	18-19	19-20	20-21	21-22	22-23	23-24	
Total Suspended Particulate (mg/m ³)	High Volume Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix B)	0.066	0.052	0.054	0.050	0.048	0.050	0.057	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)	0.030	0.023	0.026	0.021	0.022	0.024	0.023	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.

(Khemmarin Thirarathaset)

Laboratory Operator

02 / 06 / 22

(Atchara Chaiyaw)

Laboratory Supervisor

02 / 06 / 22



Ref. No. AR554(1)-AR554(7)/05/22

Report No. 2205/725

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 : Asadawut Nirapai
S.P.S. Consulting Service Co., Ltd.

Sampling Date : 17-24 May 2022
Date Received : 26 May 2022
Date of Analysis : 26 May-1 June 2022
Date Reported : 2 June 2022

Parameter	Sampling Method	Analytical Method	Diesel Hydrotreating Unit (DHT Area)							Standard
			May 2022							
			17-18	18-19	19-20	20-21	21-22	22-23	23-24	
Total Suspended Particulate (mg/m ³)	High Volume Air Sampler	Gravimetric Method (U.S. EPA 40 CFR Part 50 Appendix B)	0.036	0.037	0.035	0.036	0.036	0.037	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)	0.027	0.029	0.026	0.026	0.025	0.029	0.028	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.

(Khemmarin Thirarathaset)

Laboratory Operator

02 / 06 / 22

(Atchara Chaiyaw)

Laboratory Supervisor

02 / 06 / 22

ความเร็วและทิศทางลม



RY0266/04/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 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	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°)	10.119	1.190	-	-	-
NNE (11°-34°)	10.119	5.357	-	-	-
NE (34°-56°)	6.548	1.786	-	-	-
ENE (56°-79°)	2.381	-	-	-	-
E (79°-102°)	-	-	-	-	-
ESE (102°-124°)	-	-	-	-	-
SE (124°-146°)	-	-	-	-	-
SSE (146°-169°)	1.786	-	-	-	-
S (169°-191°)	3.571	2.381	-	-	-
SSW (191°-214°)	22.024	19.048	-	-	-
SW (214°-236°)	5.952	0.595	-	-	-
WSW (236°-259°)	2.976	1.786	-	-	-
W (259°-281°)	-	-	-	-	-
WNW (281°-304°)	-	-	-	-	-
NW (304°-326°)	-	-	-	-	-
NNW (326°-349°)	2.381	-	-	-	-
Total	67.857	32.143	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.

(Wacharapom Barisn)

Scientist

20 / 04 / 22

(Thunyaphat Lansettha)

Technical Supervisor

20 / 04 / 22



RY0266/04/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 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							
	April 2022							
	5-6		6-7		7-8		8-9	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
11:00-12:00	4.8	N	6.4	SSW	4.8	NNE	4.8	NNE
12:00-13:00	6.4	NNE	8.0	SSW	6.4	NNE	6.4	SSW
13:00-14:00	3.2	NE	8.0	SSW	4.8	NE	6.4	SSW
14:00-15:00	4.8	NE	8.0	SSW	4.8	NNE	6.4	SSW
15:00-16:00	3.2	NE	8.0	SSW	3.2	SSW	6.4	SSW
16:00-17:00	3.2	N	8.0	SSW	4.8	SSW	6.4	SSW
17:00-18:00	4.8	SSW	6.4	S	3.2	SSW	4.8	S
18:00-19:00	3.2	SSW	3.2	SSW	1.6	SSW	3.2	SSW
19:00-20:00	1.6	SSW	3.2	SSW	1.6	SSW	1.6	S
20:00-21:00	1.6	N	1.6	SSW	1.6	SW	1.6	SSW
21:00-22:00	1.6	WSW	1.6	SSW	1.6	SW	1.6	SSW
22:00-23:00	3.2	NNE	1.6	S	3.2	SW	3.2	N
23:00-00:00	3.2	NNE	1.6	NE	3.2	NE	3.2	N
00:00-01:00	1.6	NNE	3.2	NE	1.6	NE	1.6	N
01:00-02:00	1.6	NNE	3.2	ENE	1.6	N	1.6	NNE
02:00-03:00	3.2	N	1.6	SSE	3.2	N	1.6	NNE
03:00-04:00	3.2	NNW	1.6	SSE	6.4	NE	3.2	NNE
04:00-05:00	1.6	NNW	3.2	SSE	4.8	NNE	3.2	NNE
05:00-06:00	1.6	NNW	3.2	N	3.2	ENE	6.4	NNE
06:00-07:00	3.2	NNW	6.4	NNE	6.4	NE	4.8	ENE
07:00-08:00	3.2	NE	4.8	NNE	8.0	N	3.2	N
08:00-09:00	6.4	NE	6.4	NNE	8.0	NNE	3.2	ENE
09:00-10:00	4.8	NNE	3.2	NE	6.4	NNE	6.4	NNE
10:00-11:00	3.2	N	3.2	NE	4.8	NNE	6.4	NNE
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.

(Wachanpoom Bansri)

Scientist

20 / 04 / 22

(Thunyaphat Lanseththa)

Technical Supervisor

20 / 04 / 22



RY0266/04/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 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					
	April 2022					
	9-10		10-11		11-12	
	WS (km/hr)	WD	WS (km/hr)	WD	Fair	WD
11:00-12:00	4.8	SSW	6.4	SSW	4.8	WSW
12:00-13:00	6.4	S	4.8	SSW	6.4	SSW
13:00-14:00	6.4	SSW	6.4	SSW	8.0	SSW
14:00-15:00	6.4	SSW	6.4	SSW	8.0	SSW
15:00-16:00	6.4	SSW	8.0	SSW	8.0	SSW
16:00-17:00	6.4	SSW	6.4	SSW	6.4	S
17:00-18:00	4.8	SSW	6.4	SSW	4.8	SW
18:00-19:00	3.2	SSW	4.8	SSW	4.8	SW
19:00-20:00	4.8	SSW	3.2	S	6.4	SW
20:00-21:00	3.2	SSW	1.6	SSW	1.6	SSW
21:00-22:00	3.2	SSW	3.2	SSW	4.8	SSW
22:00-23:00	3.2	S	4.8	SSW	6.4	SSW
23:00-00:00	1.6	SSW	4.8	SSW	8.0	SSW
00:00-01:00	1.6	WSW	6.4	SSW	11.3	SSW
01:00-02:00	1.6	SW	4.8	SW	6.4	S
02:00-03:00	1.6	N	1.6	SW	6.4	WSW
03:00-04:00	3.2	N	4.8	SW	6.4	WSW
04:00-05:00	3.2	N	3.2	WSW	6.4	WSW
05:00-06:00	6.4	N	3.2	WSW	4.8	SSW
06:00-07:00	4.8	N	3.2	SSW	3.2	SSW
07:00-08:00	3.2	NNE	1.6	SSW	6.4	SSW
08:00-09:00	3.2	N	3.2	SSW	6.4	SSW
09:00-10:00	4.8	NNE	4.8	SW	4.8	SSW
10:00-11:00	4.8	SSW	3.2	S	6.4	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.

(Wadcharipom Barisri)

Scientist

20 / 04 / 22

(Thanyaphat Lamsatana)

Technical Supervisor

20 / 04 / 22



RY0280/05/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Wind Speed Wind Direction	Cooling Tower 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°)	4.167	-	-	-	-
NNE (11°-34°)	-	-	-	-	-
NE (34°-56°)	0.595	-	-	-	-
ENE (56°-79°)	1.190	1.190	-	-	-
E (79°-102°)	-	0.595	-	-	-
ESE (102°-124°)	-	2.976	0.595	-	-
SE (124°-146°)	-	-	-	-	-
SSE (146°-169°)	0.595	1.190	1.190	-	-
S (169°-191°)	-	-	-	-	-
SSW (191°-214°)	3.571	18.452	7.145	-	-
SW (214°-236°)	2.976	19.643	2.381	-	-
WSW (236°-259°)	4.167	6.548	4.167	-	-
W (259°-281°)	8.333	2.381	-	-	-
WNW (281°-304°)	0.595	1.786	1.786	-	-
NW (304°-326°)	-	-	-	-	-
NNW (326°-349°)	1.786	-	-	-	-
Total	27.975	54.761	17.264	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.

(Darin Thongsri)

Scientist
02 / 06 / 22

(Thunyaphat Lanseththa)

Technical Supervisor
02 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area							
	May 2022							
	17-18		18-19		19-20		20-21	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
12:00-13:00	3.2	N	8.0	SSW	9.7	ESE	14.5	WSW
13:00-14:00	4.8	N	6.4	SSW	8.0	ESE	16.1	SSW
14:00-15:00	4.8	NE	8.0	SSW	9.7	SSW	19.3	SSW
15:00-16:00	4.8	N	8.0	SW	9.7	SSW	16.1	SSW
16:00-17:00	6.4	ESE	6.4	SSW	9.7	SSW	14.5	WSW
17:00-18:00	12.9	ESE	3.2	W	11.3	WNW	11.3	SW
18:00-19:00	12.9	SSE	3.2	W	8.0	WNW	9.7	SW
19:00-20:00	11.3	SSE	3.2	W	8.0	SSW	11.3	SSW
20:00-21:00	12.9	SSW	1.6	SSW	12.9	WNW	9.7	WSW
21:00-22:00	9.7	SSW	3.2	W	12.9	WNW	6.4	SSW
22:00-23:00	4.8	SSW	3.2	WSW	14.5	SSW	4.8	SSW
23:00-00:00	8.0	SW	9.7	SW	9.7	SSW	6.4	SSW
00:00-01:00	4.8	WSW	3.2	W	9.7	SSW	9.7	SW
01:00-02:00	1.6	W	1.6	N	12.9	WNW	11.3	SSW
02:00-03:00	1.6	W	1.6	N	12.9	SSW	11.3	SSW
03:00-04:00	1.6	N	3.2	ENE	11.3	WNW	6.4	WSW
04:00-05:00	3.2	N	4.8	ENE	11.3	W	6.4	SW
05:00-06:00	3.2	NNW	4.8	SSW	12.9	SW	9.7	SW
06:00-07:00	1.6	NNW	6.4	SSW	11.3	SSW	8.0	SW
07:00-08:00	3.2	WNW	4.8	W	9.7	SSW	8.0	SSW
08:00-09:00	1.6	NNW	6.4	E	11.3	W	12.9	SSW
09:00-10:00	1.6	W	6.4	ENE	11.3	SW	14.5	SSW
10:00-11:00	3.2	SSE	6.4	ENE	12.9	WSW	12.9	WSW
11:00-12:00	9.7	ESE	8.0	ESE	14.5	WSW	12.9	SSW
Temperature Average (°C)	29.6		28.0		29.8		30.1	
Barometric Pressure Average (mmHg)	756.32		756.58		756.25		756.20	
Sky Condition	Clody and Rainy		Clody and Rainy		Clody and Rainy		Clody and Rainy	

Reported results refer to measurement time only.

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

(Darin Thongsri)

Scientist

02 / 06 / 22

Technical Supervisor

02 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Cooling Tower Area					
	May 2022					
	21-22		22-23		23-24	
	WS (km/hr)	WD	WS (km/hr)	WD	Fair	WD
12:00-13:00	11.3	SW	11.3	SSW	9.7	SW
13:00-14:00	9.7	SW	11.3	SSW	11.3	SW
14:00-15:00	9.7	WSW	14.5	SW	11.3	SSW
15:00-16:00	9.7	SW	12.9	SW	12.9	SSW
16:00-17:00	6.4	WSW	9.7	WSW	12.9	WSW
17:00-18:00	3.2	WSW	9.7	WSW	11.3	SSW
18:00-19:00	8.0	SW	9.7	SW	8.0	SSW
19:00-20:00	8.0	SW	8.0	W	6.4	SW
20:00-21:00	9.7	SW	4.8	W	8.0	SSW
21:00-22:00	9.7	WSW	6.4	WSW	8.0	SW
22:00-23:00	6.4	WSW	4.8	W	4.8	SW
23:00-00:00	6.4	W	3.2	W	4.8	WSW
00:00-01:00	4.8	W	1.6	W	6.4	SW
01:00-02:00	3.2	WSW	3.2	WSW	6.4	SW
02:00-03:00	4.8	SW	1.6	SSW	4.8	WSW
03:00-04:00	4.8	SW	3.2	SSW	4.8	SW
04:00-05:00	6.4	SW	4.8	SW	6.4	SW
05:00-06:00	9.7	SSW	6.4	SW	6.4	WSW
06:00-07:00	11.3	SSW	8.0	SW	6.4	SW
07:00-08:00	9.7	SW	9.7	SSW	8.0	SW
08:00-09:00	9.7	SW	8.0	SW	9.7	SSW
09:00-10:00	12.9	SSW	9.7	SW	11.3	SSE
10:00-11:00	12.9	SW	8.0	WSW	12.9	SSE
11:00-12:00	14.5	WSW	11.3	SSW	16.1	SSW
Temperature Average ($^{\circ}$ C)	29.5		29.8		31.6	
Barometric Pressure Average (mmHg)	756.30		756.25		756.12	
Sky Condition	Clody and Rainy		Clody and Rainy		Clody and Rainy	

Reported results refer to measurement time only.

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

(Darin Thongsri)

Scientist
02 / 06 / 22

(Thunyaphat Lanseththa)

Technical Supervisor
02 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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 (DHT 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°)	0.595	-	-	-	-
NNE (11°-34°)	3.571	-	-	-	-
NE (34°-56°)	2.381	-	-	-	-
ENE (56°-79°)	4.167	-	-	-	-
E (79°-102°)	0.595	-	-	-	-
ESE (102°-124°)	7.738	-	-	-	-
SE (124°-146°)	4.762	-	0.595	-	-
SSE (146°-169°)	9.524	-	1.786	-	-
S (169°-191°)	2.381	1.786	4.167	-	-
SSW (191°-214°)	5.357	1.190	6.548	-	-
SW (214°-236°)	16.667	0.595	2.976	-	-
WSW (236°-259°)	13.690	2.381	6.548	-	-
W (259°-281°)	-	-	-	-	-
WNW (281°-304°)	-	-	-	-	-
NW (304°-326°)	-	-	-	-	-
NNW (326°-349°)	-	-	-	-	-
Total	71.428	5.952	22.620	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.

(Darin Thongsri)

Scientist

02 / 06 / 22

(Thunyaphat Lansettha)

Technical Supervisor

02 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit (DHT Area)							
	May 2022							
	17-18		18-19		19-20		20-21	
	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD	WS (km/hr)	WD
13:00-14:00	4.8	NNE	1.6	SSE	1.6	SSE	19.3	SSE
14:00-15:00	4.8	N	1.6	SE	3.2	SSE	19.3	S
15:00-16:00	4.8	NNE	3.2	SW	3.2	SW	16.1	S
16:00-17:00	1.6	NE	3.2	SW	1.6	SW	19.3	S
17:00-18:00	1.6	SSE	1.6	WSW	3.2	SE	17.7	SSW
18:00-19:00	1.6	SSE	3.2	WSW	3.2	SSE	16.1	SSW
19:00-20:00	3.2	SSE	1.6	WSW	3.2	SSE	14.5	SSW
20:00-21:00	3.2	SE	1.6	SE	1.6	WSW	14.5	S
21:00-22:00	1.6	SE	1.6	SW	1.6	SSE	12.9	WSW
22:00-23:00	1.6	SSE	3.2	SW	1.6	SSW	12.9	WSW
23:00-00:00	3.2	SW	3.2	SW	3.2	SW	14.5	SSW
00:00-01:00	3.2	SSW	1.6	NE	1.6	WSW	12.9	WSW
01:00-02:00	3.2	S	1.6	NE	3.2	SW	14.5	WSW
02:00-03:00	1.6	ESE	3.2	NNE	3.2	SSW	17.7	SSW
03:00-04:00	1.6	ESE	1.6	ENE	1.6	SW	16.1	SW
04:00-05:00	1.6	E	1.6	ENE	3.2	SE	16.1	SW
05:00-06:00	3.2	ENE	3.2	NE	1.6	SW	17.7	SW
06:00-07:00	1.6	ENE	3.2	ESE	3.2	SW	16.1	SSW
07:00-08:00	3.2	NNE	3.2	SSW	1.6	SW	14.5	S
08:00-09:00	3.2	NNE	1.6	ENE	1.6	SSE	17.7	WSW
09:00-10:00	1.6	NNE	1.6	SSE	3.2	WSW	16.1	WSW
10:00-11:00	1.6	ENE	1.6	ENE	1.6	WSW	17.7	SSW
11:00-12:00	3.2	SE	3.2	ESE	1.6	SW	16.1	SSW
12:00-13:00	1.6	SSE	1.6	ESE	16.1	S	11.3	WSW
Temperature Average ($^{\circ}$ C)	30.2		28.6		30.7		29.4	
Barometric Pressure Average (mmHg)	756.54		757.07		756.21		756.30	
Sky Condition	Clody and Rainy		Clody and Rainy		Clody and Rainy		Clody and Rainy	

Reported results refer to measurement time only.

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

(Darin Thongsri)

Scientist
02 / 06 / 22

(Thunyaphat Lanseththa)

Technical Supervisor
02 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Wind Speed and Wind Direction Measurement Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	Diesel Hydrotreating Unit (DHT Area)					
	May 2022					
	21-22		22-23		23-24	
	WS (km/hr)	WD	WS (km/hr)	WD	Fair	WD
13:00-14:00	12.9	WSW	6.4	WSW	3.2	WSW
14:00-15:00	19.3	WSW	4.8	WSW	4.8	WSW
15:00-16:00	16.1	SSE	3.2	WSW	4.8	WSW
16:00-17:00	14.5	SSE	3.2	SSW	4.8	SW
17:00-18:00	14.5	SSW	4.8	SSW	3.2	S
18:00-19:00	17.7	SSW	3.2	SW	3.2	SW
19:00-20:00	19.3	SE	3.2	SSW	1.6	WSW
20:00-21:00	17.7	SW	1.6	SW	1.6	SW
21:00-22:00	12.9	SW	1.6	SW	1.6	ESE
22:00-23:00	11.3	SW	3.2	SSW	3.2	WSW
23:00-00:00	9.7	WSW	3.2	SSW	3.2	WSW
00:00-01:00	12.9	WSW	1.6	S	4.8	WSW
01:00-02:00	11.3	WSW	3.2	SSE	3.2	ESE
02:00-03:00	11.3	SSW	3.2	ESE	4.8	SE
03:00-04:00	14.5	SSW	1.6	ESE	3.2	S
04:00-05:00	11.3	S	1.6	ESE	3.2	WSW
05:00-06:00	9.7	SSW	3.2	SW	1.6	WSW
06:00-07:00	6.4	S	3.2	WSW	1.6	WSW
07:00-08:00	11.3	S	1.6	WSW	1.6	SW
08:00-09:00	14.5	WSW	1.6	WSW	3.2	SW
09:00-10:00	19.3	WSW	3.2	SW	3.2	SSE
10:00-11:00	16.1	S	1.6	ESE	1.6	ESE
11:00-12:00	3.2	SW	3.2	WSW	3.2	SSE
12:00-13:00	4.8	SW	3.2	ESE	1.6	SW
Temperature Average (°C)	29.3		31.3		33.7	
Barometric Pressure Average (mmHg)	756.25		756.15		756.03	
Sky Condition	Clody and Rainy		Clody and Rainy		Clody and Rainy	

Reported results refer to measurement time only.

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

(Darin Thongsri)

Scientist

02 / 06 / 22

(Thunyaphat Lanseththa)

Technical Supervisor

02 / 06 / 22

ระดับเสียง



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	April 2022		
	5-6		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	74.8	71.7	86.0
12:00-13:00	71.6		
13:00-14:00	70.6		
14:00-15:00	70.5		
15:00-16:00	70.4		
16:00-17:00	71.0		
17:00-18:00	71.1		
18:00-19:00	71.7		
19:00-20:00	70.4	70.9	78.1
20:00-21:00	70.2		
21:00-22:00	70.4		
22:00-23:00	70.9		
23:00-00:00	70.9		
00:00-01:00	71.4		
01:00-02:00	71.6		
02:00-03:00	71.5		
03:00-04:00	71.9	70.6	87.2
04:00-05:00	71.5		
05:00-06:00	69.5		
06:00-07:00	69.3		
07:00-08:00	68.9		
08:00-09:00	69.7		
09:00-10:00	69.8		
10:00-11:00	72.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
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.

(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	April 2022		
	6-7		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	69.7	70.1	85.1
12:00-13:00	68.5		
13:00-14:00	68.9		
14:00-15:00	69.7		
15:00-16:00	70.1		
16:00-17:00	70.6		
17:00-18:00	71.3		
18:00-19:00	71.1		
19:00-20:00	70.5	71.1	74.9
20:00-21:00	70.5		
21:00-22:00	70.6		
22:00-23:00	70.7		
23:00-00:00	71.2		
00:00-01:00	71.4		
01:00-02:00	71.8		
02:00-03:00	71.2		
03:00-04:00	69.8	71.0	83.5
04:00-05:00	70.1		
05:00-06:00	70.2		
06:00-07:00	70.2		
07:00-08:00	70.3		
08:00-09:00	72.4		
09:00-10:00	72.2		
10:00-11:00	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		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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

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(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	April 2022		
	7-8		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	70.8	71.2	85.8
12:00-13:00	70.9		
13:00-14:00	71.3		
14:00-15:00	71.8		
15:00-16:00	71.6		
16:00-17:00	71.7		
17:00-18:00	70.7		
18:00-19:00	70.7		
19:00-20:00	70.6	71.0	83.2
20:00-21:00	70.9		
21:00-22:00	70.9		
22:00-23:00	71.0		
23:00-00:00	71.0		
00:00-01:00	71.0		
01:00-02:00	71.1		
02:00-03:00	71.3		
03:00-04:00	71.5	71.1	88.4
04:00-05:00	71.7		
05:00-06:00	71.5		
06:00-07:00	71.5		
07:00-08:00	69.1		
08:00-09:00	70.3		
09:00-10:00	71.5		
10:00-11:00	71.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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

(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	April 2022		
	8-9		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	72.9	70.5	82.7
12:00-13:00	68.6		
13:00-14:00	70.4		
14:00-15:00	70.4		
15:00-16:00	69.8		
16:00-17:00	70.5		
17:00-18:00	70.2		
18:00-19:00	69.9		
19:00-20:00	69.9	71.8	80.5
20:00-21:00	71.1		
21:00-22:00	71.8		
22:00-23:00	71.5		
23:00-00:00	71.6		
00:00-01:00	72.4		
01:00-02:00	72.7		
02:00-03:00	72.9		
03:00-04:00	72.9	73.0	93.2
04:00-05:00	72.9		
05:00-06:00	73.0		
06:00-07:00	71.5		
07:00-08:00	69.3		
08:00-09:00	76.3		
09:00-10:00	73.7		
10:00-11:00	70.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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

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Sampling Method = Sound Level Meter

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

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(Wachariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	April 2022		
	9-10		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	68.4	71.1	88.1
12:00-13:00	69.2		
13:00-14:00	73.0		
14:00-15:00	71.2		
15:00-16:00	71.6		
16:00-17:00	72.0		
17:00-18:00	70.8		
18:00-19:00	71.0		
19:00-20:00	70.7	70.8	72.7
20:00-21:00	70.6		
21:00-22:00	70.5		
22:00-23:00	70.6		
23:00-00:00	70.6		
00:00-01:00	70.7		
01:00-02:00	71.3		
02:00-03:00	71.3		
03:00-04:00	72.0	71.4	92.5
04:00-05:00	72.4		
05:00-06:00	72.6		
06:00-07:00	71.3		
07:00-08:00	70.0		
08:00-09:00	70.3		
09:00-10:00	71.3		
10:00-11:00	70.9		
Standard		Less Than 90.0	Less Than 140.0 ⁽¹⁾ , 115.0 ⁽²⁾
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

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(Wachanaporn Barisri)

Scientist

20, 04, 22

(Kitti Srithonglor)

Technical Supervisor

20, 04, 22



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6/7

RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	April 2022		
	10-11		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	70.7	71.0	87.7
12:00-13:00	71.1		
13:00-14:00	71.0		
14:00-15:00	73.3		
15:00-16:00	70.5		
16:00-17:00	70.0		
17:00-18:00	70.1		
18:00-19:00	70.2		
19:00-20:00	70.6	71.1	85.2
20:00-21:00	70.8		
21:00-22:00	71.1		
22:00-23:00	71.5		
23:00-00:00	70.0		
00:00-01:00	72.0		
01:00-02:00	71.3		
02:00-03:00	70.9		
03:00-04:00	70.9	71.3	95.3
04:00-05:00	70.5		
05:00-06:00	70.3		
06:00-07:00	70.9		
07:00-08:00	71.1		
08:00-09:00	71.6		
09:00-10:00	72.5		
10:00-11:00	72.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
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.

(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	East Area		
	April 2022		
	11-12		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	72.5	72.3	87.9
12:00-13:00	72.1		
13:00-14:00	71.0		
14:00-15:00	71.3		
15:00-16:00	70.6		
16:00-17:00	72.1		
17:00-18:00	74.9		
18:00-19:00	72.4		
19:00-20:00	73.0	71.5	81.3
20:00-21:00	74.0		
21:00-22:00	70.7		
22:00-23:00	70.9		
23:00-00:00	70.8		
00:00-01:00	70.7		
01:00-02:00	69.7		
02:00-03:00	70.2		
03:00-04:00	70.1	71.6	92.0
04:00-05:00	70.9		
05:00-06:00	71.1		
06:00-07:00	71.5		
07:00-08:00	73.2		
08:00-09:00	72.0		
09:00-10:00	71.5		
10:00-11:00	71.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

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(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	April 2022		
	5-6		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:00-12:00	66.6	68.9	87.5
12:00-13:00	65.5		
13:00-14:00	67.0		
14:00-15:00	69.3		
15:00-16:00	68.1		
16:00-17:00	70.1		
17:00-18:00	67.4		
18:00-19:00	72.6		
19:00-20:00	66.3	66.1	74.0
20:00-21:00	65.9		
21:00-22:00	65.9		
22:00-23:00	66.1		
23:00-00:00	66.1		
00:00-01:00	66.2		
01:00-02:00	66.1		
02:00-03:00	66.3		
03:00-04:00	66.5	67.3	86.6
04:00-05:00	66.4		
05:00-06:00	66.0		
06:00-07:00	65.7		
07:00-08:00	65.3		
08:00-09:00	65.5		
09:00-10:00	65.6		
10:00-11:00	72.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R23)	ACO	6236	00192035
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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(Wadchariporn Barisri)

Scientist

20.04.22

(Kiti Srithonglor)

Technical Supervisor

20.04.22



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	April 2022		
	6-7		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	68.9	68.5	86.0
12:00-13:00	67.4		
13:00-14:00	68.0		
14:00-15:00	68.5		
15:00-16:00	68.2		
16:00-17:00	68.8		
17:00-18:00	69.5		
18:00-19:00	68.1		
19:00-20:00	68.0	67.7	82.1
20:00-21:00	67.4		
21:00-22:00	67.4		
22:00-23:00	67.5		
23:00-00:00	67.9		
00:00-01:00	67.6		
01:00-02:00	67.8		
02:00-03:00	67.9		
03:00-04:00	67.7	68.1	84.3
04:00-05:00	67.6		
05:00-06:00	67.6		
06:00-07:00	67.5		
07:00-08:00	67.7		
08:00-09:00	69.0		
09:00-10:00	69.1		
10:00-11:00	68.4		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R23)	ACO	6236	00192035
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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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.

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(Wachanaporn Barisri)

Scientist
20 / 04 / 22

(S.P.S. Consulting Service Co., Ltd.)

Technical Supervisor
20 / 04 / 22



RY0266/04/65

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 : 5-12 April 2022
Date Reported : 20 April 2022

Time	South Area		
	April 2022		
	7-8		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	67.6	68.3	82.3
12:00-13:00	67.4		
13:00-14:00	68.4		
14:00-15:00	68.8		
15:00-16:00	68.7		
16:00-17:00	68.6		
17:00-18:00	68.1		
18:00-19:00	68.2		
19:00-20:00	68.1	67.8	83.0
20:00-21:00	68.1		
21:00-22:00	67.9		
22:00-23:00	67.6		
23:00-00:00	67.7		
00:00-01:00	67.5		
01:00-02:00	67.6		
02:00-03:00	67.6		
03:00-04:00	67.6	68.3	94.0
04:00-05:00	67.8		
05:00-06:00	67.9		
06:00-07:00	67.8		
07:00-08:00	67.7		
08:00-09:00	68.9		
09:00-10:00	68.7		
10:00-11:00	69.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R23)	ACO	6236	00192035
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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

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Standard^[2] = Standard for Administration, Management and Implementation of Safety, Occupational Health and Working Environment
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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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(Wadchariporn Barisri)

Scientist
20 09 22
..... / /

(Rita Srimongkol)

Technical Supervisor
20 04 22
..... / /



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	April 2022		
	8-9		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	71.1	70.2	86.3
12:00-13:00	68.0		
13:00-14:00	70.0		
14:00-15:00	70.8		
15:00-16:00	70.3		
16:00-17:00	70.8		
17:00-18:00	70.3		
18:00-19:00	69.2		
19:00-20:00	69.3	68.7	76.2
20:00-21:00	69.6		
21:00-22:00	70.2		
22:00-23:00	69.7		
23:00-00:00	69.3		
00:00-01:00	68.9		
01:00-02:00	65.3		
02:00-03:00	64.2		
03:00-04:00	64.0	67.3	88.6
04:00-05:00	64.3		
05:00-06:00	64.6		
06:00-07:00	63.5		
07:00-08:00	63.2		
08:00-09:00	71.0		
09:00-10:00	69.8		
10:00-11:00	69.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R23)	ACO	6236	00192035
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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Scientist
30 04 22



Technical Supervisor
10 04 22



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Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	April 2022		
	9-10		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	67.7	69.4	89.6
12:00-13:00	67.3		
13:00-14:00	70.2		
14:00-15:00	70.5		
15:00-16:00	70.3		
16:00-17:00	70.7		
17:00-18:00	68.8		
18:00-19:00	68.3		
19:00-20:00	67.8	67.4	81.6
20:00-21:00	67.3		
21:00-22:00	67.4		
22:00-23:00	67.2		
23:00-00:00	67.4		
00:00-01:00	67.2		
01:00-02:00	67.5		
02:00-03:00	67.4		
03:00-04:00	67.5	69.7	95.2
04:00-05:00	67.7		
05:00-06:00	68.0		
06:00-07:00	67.3		
07:00-08:00	67.4		
08:00-09:00	72.2		
09:00-10:00	70.4		
10:00-11:00	72.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R23)	ACO	6236	00192035
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	April 2022		
	10-11		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	67.4	69.7	89.4
12:00-13:00	67.1		
13:00-14:00	68.9		
14:00-15:00	70.7		
15:00-16:00	71.2		
16:00-17:00	68.4		
17:00-18:00	72.3		
18:00-19:00	69.0		
19:00-20:00	67.4	67.3	86.3
20:00-21:00	67.3		
21:00-22:00	67.4		
22:00-23:00	67.4		
23:00-00:00	67.3		
00:00-01:00	67.3		
01:00-02:00	67.2		
02:00-03:00	67.1		
03:00-04:00	67.2	68.9	86.6
04:00-05:00	67.3		
05:00-06:00	67.5		
06:00-07:00	67.5		
07:00-08:00	67.7		
08:00-09:00	72.0		
09:00-10:00	70.5		
10:00-11:00	68.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R23)	ACO	6236	00192035
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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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

(Wadchariporn Barisri)

Scientist

20, 04, 22

(Kitti Srithonglor)

Technical Supervisor

20, 04, 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
S.P.S. CONSULTING SERVICE CO., LTD.
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Tel : (662) 939-4370-72, Fax : (662) 513-4221. E-mail : sale@spscon.com., www.spscon.com

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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	South Area		
	April 2022		
	11-12		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	63.7	70.2	91.7
12:00-13:00	65.1		
13:00-14:00	67.4		
14:00-15:00	70.4		
15:00-16:00	72.5		
16:00-17:00	70.6		
17:00-18:00	72.0		
18:00-19:00	72.4		
19:00-20:00	70.2	69.7	84.5
20:00-21:00	71.1		
21:00-22:00	69.8		
22:00-23:00	70.2		
23:00-00:00	71.4		
00:00-01:00	68.0		
01:00-02:00	67.7		
02:00-03:00	67.5		
03:00-04:00	67.5	68.1	83.0
04:00-05:00	67.6		
05:00-06:00	67.7		
06:00-07:00	67.8		
07:00-08:00	67.4		
08:00-09:00	68.0		
09:00-10:00	69.5		
10:00-11:00	68.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R23)	ACO	6236	00192035
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.

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Scientist

20 04 22

Technical Supervisor

20 04 22



RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	April 2022		
	5-6		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
10:00-11:00	78.3	74.0	94.4
11:00-12:00	75.4		
12:00-13:00	66.5		
13:00-14:00	68.7		
14:00-15:00	72.0		
15:00-16:00	72.6		
16:00-17:00	73.3		
17:00-18:00	74.7		
18:00-19:00	68.6	67.3	83.9
19:00-20:00	66.1		
20:00-21:00	66.5		
21:00-22:00	67.0		
22:00-23:00	67.7		
23:00-00:00	66.9		
00:00-01:00	67.7		
01:00-02:00	67.1		
02:00-03:00	66.7	69.3	93.2
03:00-04:00	66.3		
04:00-05:00	66.6		
05:00-06:00	66.9		
06:00-07:00	66.9		
07:00-08:00	66.2		
08:00-09:00	68.4		
09:00-10:00	75.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R10)	ACO	6236	00172037
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kiti Srithonglor)

Technical Supervisor

20 / 04 / 22



RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	April 2022		
	6-7		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
10:00-11:00	82.4	75.4	98.2
11:00-12:00	77.4		
12:00-13:00	66.5		
13:00-14:00	68.7		
14:00-15:00	69.5		
15:00-16:00	68.3		
16:00-17:00	71.6		
17:00-18:00	68.8		
18:00-19:00	67.3	67.0	79.2
19:00-20:00	67.0		
20:00-21:00	66.8		
21:00-22:00	66.7		
22:00-23:00	66.9		
23:00-00:00	67.2		
00:00-01:00	66.9		
01:00-02:00	67.3		
02:00-03:00	67.2	70.0	93.2
03:00-04:00	67.0		
04:00-05:00	67.7		
05:00-06:00	67.8		
06:00-07:00	67.2		
07:00-08:00	67.2		
08:00-09:00	68.3		
09:00-10:00	76.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R10)	ACO	6236	00172037
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	April 2022		
	7-8		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:00-11:00	72.1	70.7	88.9
11:00-12:00	68.7		
12:00-13:00	66.4		
13:00-14:00	70.1		
14:00-15:00	71.5		
15:00-16:00	72.3		
16:00-17:00	73.0		
17:00-18:00	67.0		
18:00-19:00	67.3	67.2	82.0
19:00-20:00	67.0		
20:00-21:00	67.5		
21:00-22:00	67.2		
22:00-23:00	67.0		
23:00-00:00	67.3		
00:00-01:00	66.8		
01:00-02:00	67.2		
02:00-03:00	67.8	70.4	93.2
03:00-04:00	66.8		
04:00-05:00	67.9		
05:00-06:00	68.2		
06:00-07:00	67.6		
07:00-08:00	67.1		
08:00-09:00	74.9		
09:00-10:00	73.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R10)	ACO	6236	00172037
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Wacharaporn Barish)

Scientist
80, 04, 22

(Kitti Srithonglor)

Technical Supervisor
10, 04, 22



RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	April 2022		
	8-9		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
10:00-11:00	72.1	72.7	95.3
11:00-12:00	73.1		
12:00-13:00	66.0		
13:00-14:00	71.6		
14:00-15:00	72.8		
15:00-16:00	73.2		
16:00-17:00	74.6		
17:00-18:00	73.7		
18:00-19:00	72.6	69.9	89.0
19:00-20:00	68.6		
20:00-21:00	70.9		
21:00-22:00	71.8		
22:00-23:00	70.0		
23:00-00:00	68.1		
00:00-01:00	66.6		
01:00-02:00	66.6		
02:00-03:00	66.7	68.3	90.9
03:00-04:00	66.3		
04:00-05:00	67.1		
05:00-06:00	66.9		
06:00-07:00	66.7		
07:00-08:00	66.2		
08:00-09:00	68.8		
09:00-10:00	72.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R10)	ACO	6236	00172037
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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(Wachanorn Baris)

Scientist

20 / 04 / 22



(Kitti Sittongkol)

Technical Supervisor

20 / 04 / 22



RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	April 2022		
	9-10		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
10:00-11:00	70.1	69.3	90.1
11:00-12:00	68.6		
12:00-13:00	65.7		
13:00-14:00	67.6		
14:00-15:00	71.7		
15:00-16:00	70.8		
16:00-17:00	69.9		
17:00-18:00	67.3		
18:00-19:00	67.6	66.5	87.0
19:00-20:00	66.6		
20:00-21:00	66.3		
21:00-22:00	66.2		
22:00-23:00	66.4		
23:00-00:00	66.5		
00:00-01:00	66.1		
01:00-02:00	66.4		
02:00-03:00	66.3	67.1	91.0
03:00-04:00	66.5		
04:00-05:00	66.8		
05:00-06:00	67.0		
06:00-07:00	66.9		
07:00-08:00	66.3		
08:00-09:00	67.2		
09:00-10:00	69.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R10)	ACO	6236	00172037
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kiiti Srithonglor)

Technical Supervisor

20 / 04 / 22



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Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	April 2022		
	10-11		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
10:00-11:00	68.3	68.4	90.6
11:00-12:00	66.6		
12:00-13:00	66.3		
13:00-14:00	68.5		
14:00-15:00	67.9		
15:00-16:00	68.0		
16:00-17:00	67.9		
17:00-18:00	71.6		
18:00-19:00	66.8	66.6	68.9
19:00-20:00	66.7		
20:00-21:00	66.6		
21:00-22:00	66.7		
22:00-23:00	66.8		
23:00-00:00	66.9		
00:00-01:00	66.3		
01:00-02:00	66.4		
02:00-03:00	66.3	67.0	76.7
03:00-04:00	66.3		
04:00-05:00	66.6		
05:00-06:00	66.8		
06:00-07:00	67.3		
07:00-08:00	66.9		
08:00-09:00	67.8		
09:00-10:00	68.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R10)	ACO	6236	00172037
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Wadchariporn Barisri)

Scientist

20 04 22

(Kitti Srithonglor)

Technical Supervisor

20 04 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
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Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 20 April 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	West Area		
	April 2022		
	11-12		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:00-11:00	67.8	71.4	95.1
11:00-12:00	66.3		
12:00-13:00	66.3		
13:00-14:00	68.0		
14:00-15:00	75.5		
15:00-16:00	74.1		
16:00-17:00	70.5		
17:00-18:00	72.4		
18:00-19:00	74.9	72.7	82.2
19:00-20:00	74.9		
20:00-21:00	74.1		
21:00-22:00	73.7		
22:00-23:00	69.1		
23:00-00:00	70.9		
00:00-01:00	71.9		
01:00-02:00	66.3	66.3	74.9
02:00-03:00	66.2		
03:00-04:00	66.1		
04:00-05:00	66.5		
05:00-06:00	66.6		
06:00-07:00	66.4		
07:00-08:00	66.2		
08:00-09:00	66.0		
09:00-10:00	66.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R10)	ACO	6236	00172037
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.1		94.0	

Remark:

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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.

(Wadchariporn Barisri)

Scientist

30 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

30 / 04 / 22



RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	April 2022		
	5-6		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:00-11:00	80.7	75.4	105.2
11:00-12:00	73.4		
12:00-13:00	72.7		
13:00-14:00	73.0		
14:00-15:00	73.3		
15:00-16:00	73.1		
16:00-17:00	75.3		
17:00-18:00	73.5		
18:00-19:00	73.5	73.3	76.2
19:00-20:00	73.4		
20:00-21:00	73.4		
21:00-22:00	73.5		
22:00-23:00	73.6		
23:00-00:00	73.6		
00:00-01:00	72.9		
01:00-02:00	72.5		
02:00-03:00	73.2	74.2	103.2
03:00-04:00	74.1		
04:00-05:00	74.3		
05:00-06:00	73.2		
06:00-07:00	72.5		
07:00-08:00	73.1		
08:00-09:00	76.3		
09:00-10:00	75.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R20)	ACO	6236	00182003
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

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(Wachariporn Barisri)

Scientist
30 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor
30 / 04 / 22



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 20 April 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	April 2022		
	6-7		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
10:00-11:00	77.2	74.5	101.8
11:00-12:00	75.5		
12:00-13:00	73.5		
13:00-14:00	73.6		
14:00-15:00	73.3		
15:00-16:00	73.6		
16:00-17:00	73.7		
17:00-18:00	73.5		
18:00-19:00	73.6	73.2	78.9
19:00-20:00	73.3		
20:00-21:00	73.2		
21:00-22:00	73.2		
22:00-23:00	73.4		
23:00-00:00	72.8		
00:00-01:00	72.9		
01:00-02:00	73.1	73.5	98.9
02:00-03:00	73.3		
03:00-04:00	73.2		
04:00-05:00	73.8		
05:00-06:00	73.5		
06:00-07:00	73.5		
07:00-08:00	73.5		
08:00-09:00	74.0		
09:00-10:00	73.6		
Standard		Less Than 90.0	Less Than 140.0 ⁽¹⁾ , 115.0 ⁽²⁾
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R20)	ACO	6236	00182003
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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

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(Wachariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	April 2022		
	7-8		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
10:00-11:00	73.4	73.5	99.8
11:00-12:00	73.5		
12:00-13:00	73.0		
13:00-14:00	72.9		
14:00-15:00	74.5		
15:00-16:00	73.5		
16:00-17:00	73.2		
17:00-18:00	73.5		
18:00-19:00	73.2	73.6	81.6
19:00-20:00	73.6		
20:00-21:00	73.6		
21:00-22:00	73.5		
22:00-23:00	73.9		
23:00-00:00	74.1		
00:00-01:00	73.4		
01:00-02:00	73.7		
02:00-03:00	73.8	74.1	91.8
03:00-04:00	73.3		
04:00-05:00	74.1		
05:00-06:00	74.3		
06:00-07:00	74.3		
07:00-08:00	73.5		
08:00-09:00	74.1		
09:00-10:00	74.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R20)	ACO	6236	00182003
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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Scientist
30 / 04 / 22



(Kitti Srithonglor)
Technical Supervisor
10 / 04 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	April 2022		
	8-9		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:00-11:00	74.6	75.0	107.1
11:00-12:00	76.6		
12:00-13:00	73.7		
13:00-14:00	74.2		
14:00-15:00	74.4		
15:00-16:00	73.4		
16:00-17:00	77.1		
17:00-18:00	74.3		
18:00-19:00	74.5	74.3	84.2
19:00-20:00	75.3		
20:00-21:00	74.7		
21:00-22:00	75.2		
22:00-23:00	74.4		
23:00-00:00	73.6		
00:00-01:00	73.0		
01:00-02:00	72.9	73.1	96.2
02:00-03:00	73.1		
03:00-04:00	72.7		
04:00-05:00	73.1		
05:00-06:00	73.1		
06:00-07:00	73.0		
07:00-08:00	73.2		
08:00-09:00	72.8		
09:00-10:00	73.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R20)	ACO	6236	00182003
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Wachariporn Barisri)

Scientist
20 / 04 / 22

(Kitti Srithonglor)

Technical Supervisor
16 / 04 / 22



RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	April 2022		
	9-10		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:00-11:00	73.2	73.7	82.1
11:00-12:00	73.8		
12:00-13:00	72.6		
13:00-14:00	73.2		
14:00-15:00	73.9		
15:00-16:00	74.5		
16:00-17:00	74.3		
17:00-18:00	74.2		
18:00-19:00	74.1	73.5	76.6
19:00-20:00	74.0		
20:00-21:00	73.8		
21:00-22:00	73.5		
22:00-23:00	73.5		
23:00-00:00	73.5		
00:00-01:00	73.0		
01:00-02:00	72.9	73.1	79.8
02:00-03:00	72.7		
03:00-04:00	72.8		
04:00-05:00	73.1		
05:00-06:00	73.4		
06:00-07:00	73.4		
07:00-08:00	73.4		
08:00-09:00	73.1		
09:00-10:00	73.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R20)	ACO	6236	00182003
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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[Redacted Signature]

(Phacharaporn Buran)

Scientist

20 / 04 / 22

[Redacted Signature]

(Kitti Srithonglor)

Technical Supervisor

20 / 04 / 22



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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	April 2022		
	10-11		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:00-11:00	73.2	73.6	78.2
11:00-12:00	74.1		
12:00-13:00	73.6		
13:00-14:00	74.1		
14:00-15:00	73.9		
15:00-16:00	73.8		
16:00-17:00	73.8		
17:00-18:00	71.6		
18:00-19:00	74.6	74.5	75.0
19:00-20:00	73.8		
20:00-21:00	73.6		
21:00-22:00	73.6		
22:00-23:00	73.5		
23:00-00:00	73.5		
00:00-01:00	73.1		
01:00-02:00	73.1		
02:00-03:00	73.1	73.0	76.8
03:00-04:00	73.0		
04:00-05:00	73.4		
05:00-06:00	73.4		
06:00-07:00	73.2		
07:00-08:00	73.1		
08:00-09:00	73.0		
09:00-10:00	72.9		
Standard		Less Than 90.0	Less Than 140.0 ⁽¹⁾ , 115.0 ⁽²⁾
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R20)	ACO	6236	00182003
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Wadchariporn Barisri)

Scientist

20 / 04 / 22

(Kitti Srimongkol)

Technical Supervisor

20 / 04 / 22



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RY0266/04/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 5-12 April 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 20 April 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	North Area		
	April 2022		
	11-12		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
10:00-11:00	72.8	82.7	82.7
11:00-12:00	72.3		
12:00-13:00	73.0		
13:00-14:00	72.3		
14:00-15:00	74.0		
15:00-16:00	74.1		
16:00-17:00	73.2		
17:00-18:00	72.9		
18:00-19:00	73.6	73.2	82.0
19:00-20:00	73.4		
20:00-21:00	73.2		
21:00-22:00	73.3		
22:00-23:00	73.0		
23:00-00:00	73.4		
00:00-01:00	73.2		
01:00-02:00	72.4	72.6	80.5
02:00-03:00	72.3		
03:00-04:00	72.3		
04:00-05:00	72.9		
05:00-06:00	72.9		
06:00-07:00	72.8		
07:00-08:00	72.5		
08:00-09:00	72.1		
09:00-10:00	72.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_146/22		04 April 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R20)	ACO	6236	00182003
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

(Wachariporn Barisri)

Scientist
20 / 04 / 22

(Kitti Srimongkol)

Technical Supervisor
26 / 04 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	68.1	71.5	94.4
13:00-14:00	67.9		
14:00-15:00	69.3		
15:00-16:00	74.2		
16:00-17:00	75.2		
17:00-18:00	72.0		
18:00-19:00	69.7		
19:00-20:00	69.1		
20:00-21:00	69.6	68.9	93.9
21:00-22:00	69.6		
22:00-23:00	69.3		
23:00-00:00	69.7		
00:00-01:00	69.6		
01:00-02:00	68.1		
02:00-03:00	67.1		
03:00-04:00	66.6		
04:00-05:00	66.8	69.3	93.1
05:00-06:00	66.7		
06:00-07:00	66.9		
07:00-08:00	67.0		
08:00-09:00	68.0		
09:00-10:00	72.2		
10:00-11:00	71.8		
11:00-12:00	70.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R39)	ACO	6236	00192051
		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,
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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

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(Darin Thongsri)

Scientist

2, 06, 22

(Kitti Srithonglor)

Technical Supervisor

2, 06, 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	68.8	71.5	93.6
13:00-14:00	68.8		
14:00-15:00	75.2		
15:00-16:00	72.8		
16:00-17:00	71.6		
17:00-18:00	71.2		
18:00-19:00	69.3		
19:00-20:00	69.7		
20:00-21:00	69.7	68.7	95.5
21:00-22:00	69.4		
22:00-23:00	69.2		
23:00-00:00	70.1		
00:00-01:00	68.4		
01:00-02:00	67.5		
02:00-03:00	67.4		
03:00-04:00	67.3		
04:00-05:00	67.3	71.1	96.4
05:00-06:00	67.6		
06:00-07:00	69.9		
07:00-08:00	69.6		
08:00-09:00	69.4		
09:00-10:00	69.6		
10:00-11:00	71.4		
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_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R39)	ACO	6236	00192051
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

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Sampling Method = Sound Level Meter

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

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2 / 06 / 22

(Kitti Srithonglor)

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	77.4	77.8	87.5
13:00-14:00	81.7		
14:00-15:00	79.7		
15:00-16:00	78.0		
16:00-17:00	75.7		
17:00-18:00	75.0		
18:00-19:00	74.9		
19:00-20:00	74.3		
20:00-21:00	74.3	74.3	80.1
21:00-22:00	74.2		
22:00-23:00	74.2		
23:00-00:00	74.4		
00:00-01:00	74.5		
01:00-02:00	74.2		
02:00-03:00	74.1		
03:00-04:00	74.2		
04:00-05:00	74.2	79.1	100.7
05:00-06:00	74.3		
06:00-07:00	74.4		
07:00-08:00	74.8		
08:00-09:00	83.9		
09:00-10:00	78.3		
10:00-11:00	82.1		
11:00-12:00	78.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R39)	ACO	6236	00192051
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

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Sampling Method = Sound Level Meter

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

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Scientist

2 / 06 / 22

(Kitti Srithonglor)

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	20-21		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	70.7	70.9	95.6
13:00-14:00	69.2		
14:00-15:00	70.3		
15:00-16:00	71.8		
16:00-17:00	71.7		
17:00-18:00	72.2		
18:00-19:00	70.6		
19:00-20:00	69.9		
20:00-21:00	68.7	68.3	88.2
21:00-22:00	69.2		
22:00-23:00	68.9		
23:00-00:00	68.8		
00:00-01:00	68.3		
01:00-02:00	67.5		
02:00-03:00	67.3		
03:00-04:00	67.5		
04:00-05:00	67.3	70.2	98.2
05:00-06:00	67.3		
06:00-07:00	67.3		
07:00-08:00	67.6		
08:00-09:00	68.0		
09:00-10:00	75.4		
10:00-11:00	71.1		
11:00-12:00	68.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R39)	ACO	6236	00192051
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

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Sampling Method = Sound Level Meter

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(Darin Thongsri)

Scientist

2 / 06 / 22

(Darin Thongsri)

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	21-22		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	67.4	69.4	91.9
13:00-14:00	68.3		
14:00-15:00	69.8		
15:00-16:00	71.3		
16:00-17:00	71.3		
17:00-18:00	69.2		
18:00-19:00	68.5		
19:00-20:00	67.2		
20:00-21:00	67.6	67.3	82.1
21:00-22:00	67.3		
22:00-23:00	67.2		
23:00-00:00	67.5		
00:00-01:00	67.4		
01:00-02:00	67.0		
02:00-03:00	67.1		
03:00-04:00	67.0		
04:00-05:00	67.0	72.2	98.6
05:00-06:00	67.4		
06:00-07:00	67.3		
07:00-08:00	67.3		
08:00-09:00	71.3		
09:00-10:00	74.2		
10:00-11:00	74.1		
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_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R39)	ACO	6236	00192051
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

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Sampling Method = Sound Level Meter

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

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(Darin Thongsri)

Scientist

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(Kitti Srithonglor)

Technical Supervisor

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	22-23		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	71.1	71.7	94.8
13:00-14:00	73.9		
14:00-15:00	75.5		
15:00-16:00	72.6		
16:00-17:00	69.6		
17:00-18:00	68.1		
18:00-19:00	67.6		
19:00-20:00	66.7		
20:00-21:00	66.7	67.0	82.6
21:00-22:00	66.4		
22:00-23:00	67.4		
23:00-00:00	66.5		
00:00-01:00	66.8		
01:00-02:00	66.4		
02:00-03:00	66.8		
03:00-04:00	68.6		
04:00-05:00	66.5	69.7	98.7
05:00-06:00	66.6		
06:00-07:00	66.7		
07:00-08:00	67.8		
08:00-09:00	72.6		
09:00-10:00	69.6		
10:00-11:00	72.7		
11:00-12:00	69.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R39)	ACO	6236	00192051
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)			
	May 2022			
	23-24			
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]	
12:00-13:00	67.7	71.9	93.2	
13:00-14:00	72.5			
14:00-15:00	75.5			
15:00-16:00	72.3			
16:00-17:00	70.7			
17:00-18:00	70.9			
18:00-19:00	72.2			
19:00-20:00	69.3			
20:00-21:00	68.9	68.1	90.4	
21:00-22:00	69.8			
22:00-23:00	68.9			
23:00-00:00	67.7			
00:00-01:00	67.2			
01:00-02:00	66.8			
02:00-03:00	66.6			
03:00-04:00	67.9			
04:00-05:00	66.6	69.7	94.0	
05:00-06:00	66.8			
06:00-07:00	67.3			
07:00-08:00	68.9			
08:00-09:00	71.0			
09:00-10:00	72.9			
10:00-11:00	70.9			
11:00-12:00	68.4			
Standard		Less Than 90.0		Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data				
Calibrate Sheet No.: Noise R_243/22			16 May 2022	
Equipment	Brand	Model	Serial No.	Standard
Sound Level Meter (No.R39)	ACO	6236	00192051	IEC 61672
Actual Reading [dB]				
Before Adjustment		After Adjustment		
94.0		94.0		

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Sampling Method = Sound Level Meter

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(Darin Thongsri)

Scientist

2 / 06 / 22

(Kitti Srithonglor)

Technical Supervisor

2 / 06 / 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

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	76.5	79.4	103.3
13.00-14.00	77.4		
14.00-15.00	77.9		
15.00-16.00	82.5		
16.00-17.00	82.2		
17.00-18.00	79.8		
18.00-19.00	76.8		
19.00-20.00	77.6		
20.00-21.00	77.5	76.1	94.7
21.00-22.00	76.7		
22.00-23.00	76.3		
23.00-00.00	76.6		
00.00-01.00	76.2		
01.00-02.00	75.3		
02.00-03.00	75.0		
03.00-04.00	74.7	77.4	97.5
04.00-05.00	74.9		
05.00-06.00	75.3		
06.00-07.00	75.5		
07.00-08.00	75.7		
08.00-09.00	76.4		
09.00-10.00	79.9		
10.00-11.00	80.0		
11.00-12.00	78.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

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Sampling Method = Sound Level Meter

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

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Scientist

2 / 06 / 22

Technical Supervisor

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	77.9	79.2	99.8
13.00-14.00	76.3		
14.00-15.00	77.6		
15.00-16.00	78.1		
16.00-17.00	83.2		
17.00-18.00	80.5		
18.00-19.00	78.5		
19.00-20.00	76.6	80.6	95.2
20.00-21.00	81.0		
21.00-22.00	80.5		
22.00-23.00	80.3		
23.00-00.00	80.5		
00.00-01.00	80.4		
01.00-02.00	81.4	82.5	101.8
02.00-03.00	79.9		
03.00-04.00	80.7		
04.00-05.00	79.9		
05.00-06.00	80.3		
06.00-07.00	80.0		
07.00-08.00	81.5		
08.00-09.00	80.2	82.5	101.8
09.00-10.00	82.7		
10.00-11.00	86.3		
11.00-12.00	84.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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[Redacted Signature]

Scientist
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Technical Supervisor
2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	68.6	69.6	94.9
13.00-14.00	70.3		
14.00-15.00	70.3		
15.00-16.00	71.0		
16.00-17.00	69.6		
17.00-18.00	68.4		
18.00-19.00	70.2		
19.00-20.00	77.6	65.2	86.7
20.00-21.00	66.7		
21.00-22.00	66.1		
22.00-23.00	65.5		
23.00-00.00	65.3		
00.00-01.00	64.8		
01.00-02.00	64.3		
02.00-03.00	64.2		
03.00-04.00	74.7	72.6	98.1
04.00-05.00	64.1		
05.00-06.00	64.2		
06.00-07.00	66.0		
07.00-08.00	65.6		
08.00-09.00	67.1		
09.00-10.00	79.7		
10.00-11.00	71.9		
11.00-12.00	78.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		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.

(Darin Thongsri)

Scientist

2 / 06 / 22

Technical Supervisor

2 / 06 / 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

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	20-21		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	67.7	69.6	96.5
13.00-14.00	67.0		
14.00-15.00	67.9		
15.00-16.00	71.5		
16.00-17.00	72.9		
17.00-18.00	70.2		
18.00-19.00	68.5		
19.00-20.00	66.7	65.8	92.7
20.00-21.00	66.2		
21.00-22.00	65.8		
22.00-23.00	65.9		
23.00-00.00	65.7		
00.00-01.00	66.2		
01.00-02.00	65.3		
02.00-03.00	65.1		
03.00-04.00	65.8	69.6	96.8
04.00-05.00	65.1		
05.00-06.00	66.3		
06.00-07.00	66.8		
07.00-08.00	65.3		
08.00-09.00	65.7		
09.00-10.00	71.1		
10.00-11.00	75.4		
11.00-12.00	68.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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

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(Barin Thongsri)

Scientist

2, 06, 22

(Barin Thongsri)

Technical Supervisor

2, 06, 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	21-22		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	64.7	70.9	97.4
13.00-14.00	65.4		
14.00-15.00	70.5		
15.00-16.00	73.1		
16.00-17.00	76.1		
17.00-18.00	69.3		
18.00-19.00	68.7		
19.00-20.00	65.7		
20.00-21.00	65.5	65.9	76.7
21.00-22.00	66.1		
22.00-23.00	65.3		
23.00-00.00	65.7		
00.00-01.00	65.6		
01.00-02.00	65.3		
02.00-03.00	66.3		
03.00-04.00	67.1		
04.00-05.00	65.3	73.9	99.7
05.00-06.00	65.7		
06.00-07.00	65.5		
07.00-08.00	65.9		
08.00-09.00	66.2		
09.00-10.00	75.9		
10.00-11.00	79.5		
11.00-12.00	77.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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(Darin Thongsri)

Scientist

2 / 06 / 22

(Kitti Sonthonglor)

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	22-23		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	72.1	69.5	88.6
13.00-14.00	70.9		
14.00-15.00	72.3		
15.00-16.00	69.5		
16.00-17.00	67.7		
17.00-18.00	65.7		
18.00-19.00	65.4		
19.00-20.00	64.8		
20.00-21.00	64.7	64.8	77.5
21.00-22.00	64.6		
22.00-23.00	65.1		
23.00-00.00	64.7		
00.00-01.00	64.9		
01.00-02.00	64.3		
02.00-03.00	64.6		
03.00-04.00	65.8		
04.00-05.00	64.5	70.1	102.6
05.00-06.00	64.7		
06.00-07.00	64.8		
07.00-08.00	65.0		
08.00-09.00	67.3		
09.00-10.00	75.5		
10.00-11.00	71.9		
11.00-12.00	71.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

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Scientist

2, 06, 22

Technical Supervisor

2, 06, 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	23-24		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	72.1	79.0	99.3
13.00-14.00	75.8		
14.00-15.00	83.9		
15.00-16.00	81.6		
16.00-17.00	75.7		
17.00-18.00	75.3		
18.00-19.00	79.3		
19.00-20.00	75.5		
20.00-21.00	75.8	75.5	88.3
21.00-22.00	76.0		
22.00-23.00	76.2		
23.00-00.00	75.9		
00.00-01.00	75.3		
01.00-02.00	75.0		
02.00-03.00	74.9		
03.00-04.00	75.0		
04.00-05.00	73.7	80.7	100.9
05.00-06.00	73.6		
06.00-07.00	74.0		
07.00-08.00	74.1		
08.00-09.00	81.7		
09.00-10.00	84.4		
10.00-11.00	85.8		
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_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R18)	ACO	6236	00172065
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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(Darin Thongsri)

Scientist

2 / 06 / 22

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	71.8	75.9	101.1
13.00-14.00	72.4		
14.00-15.00	77.7		
15.00-16.00	76.4		
16.00-17.00	79.4		
17.00-18.00	76.3		
18.00-19.00	73.4		
19.00-20.00	73.7		
20.00-21.00	73.1	72.0	88.9
21.00-22.00	73.2		
22.00-23.00	73.0		
23.00-00.00	72.1		
00.00-01.00	71.6		
01.00-02.00	71.2		
02.00-03.00	70.4		
03.00-04.00	69.8		
04.00-05.00	70.2	72.8	101.8
05.00-06.00	70.1		
06.00-07.00	69.7		
07.00-08.00	70.2		
08.00-09.00	71.5		
09.00-10.00	74.7		
10.00-11.00	77.1		
11.00-12.00	72.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R24)	ACO	6236	00192036
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

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(Darin Thongsri)

Scientist

2 / 06 / 22

(Kitti Srimongkol)

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	71.8	73.9	103.2
13.00-14.00	73.1		
14.00-15.00	76.1		
15.00-16.00	75.4		
16.00-17.00	75.1		
17.00-18.00	73.1		
18.00-19.00	72.4		
19.00-20.00	72.3	70.4	90.1
20.00-21.00	72.3		
21.00-22.00	72.0		
22.00-23.00	71.9		
23.00-00.00	72.2		
00.00-01.00	67.1		
01.00-02.00	67.4	69.5	86.6
02.00-03.00	67.8		
03.00-04.00	68.1		
04.00-05.00	68.3		
05.00-06.00	68.6		
06.00-07.00	73.5		
07.00-08.00	69.6		
08.00-09.00	68.6		
09.00-10.00	68.5		
10.00-11.00	67.9		
11.00-12.00	67.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R24)	ACO	6236	00192036
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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
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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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Scientist

2 / 06 / 22

(Kitt Sritonglor)

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	67.3	75.4	98.9
13.00-14.00	73.4		
14.00-15.00	74.5		
15.00-16.00	77.7		
16.00-17.00	78.9		
17.00-18.00	74.8		
18.00-19.00	75.4		
19.00-20.00	73.7		
20.00-21.00	72.3	71.9	89.3
21.00-22.00	72.2		
22.00-23.00	71.7		
23.00-00.00	71.8		
00.00-01.00	72.1		
01.00-02.00	72.6		
02.00-03.00	71.2		
03.00-04.00	69.8		
04.00-05.00	71.9	73.9	97.5
05.00-06.00	71.3		
06.00-07.00	71.6		
07.00-08.00	65.7		
08.00-09.00	65.5		
09.00-10.00	75.5		
10.00-11.00	78.4		
11.00-12.00	72.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R24)	ACO	6236	00192036
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

Scientist

2 / 06 / 22

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	20-21		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12.00-13.00	73.3	74.4	98.4
13.00-14.00	72.3		
14.00-15.00	73.5		
15.00-16.00	76.4		
16.00-17.00	76.1		
17.00-18.00	75.0		
18.00-19.00	74.3		
19.00-20.00	72.3		
20.00-21.00	72.0	71.7	87.2
21.00-22.00	72.6		
22.00-23.00	71.9		
23.00-00.00	70.7		
00.00-01.00	71.4		
01.00-02.00	71.3		
02.00-03.00	71.6		
03.00-04.00	72.1		
04.00-05.00	70.9	73.4	92.9
05.00-06.00	71.2		
06.00-07.00	72.5		
07.00-08.00	72.8		
08.00-09.00	75.2		
09.00-10.00	75.0		
10.00-11.00	74.3		
11.00-12.00	73.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R24)	ACO	6236	00192036
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.

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	21-22		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	70.5	73.4	97.8
13.00-14.00	71.0		
14.00-15.00	74.2		
15.00-16.00	73.1		
16.00-17.00	76.1		
17.00-18.00	75.0		
18.00-19.00	71.9		
19.00-20.00	72.2		
20.00-21.00	70.5	71.2	75.8
21.00-22.00	70.3		
22.00-23.00	71.6		
23.00-00.00	70.7		
00.00-01.00	72.2		
01.00-02.00	71.9		
02.00-03.00	70.7		
03.00-04.00	71.1		
04.00-05.00	70.9	72.7	93.3
05.00-06.00	71.3		
06.00-07.00	71.1		
07.00-08.00	70.6		
08.00-09.00	71.3		
09.00-10.00	74.6		
10.00-11.00	75.1		
11.00-12.00	73.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R24)	ACO	6236	00192036
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	22-23		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	72.9	71.9	93.0
13.00-14.00	73.6		
14.00-15.00	72.6		
15.00-16.00	72.5		
16.00-17.00	71.1		
17.00-18.00	70.9		
18.00-19.00	70.6		
19.00-20.00	69.6		
20.00-21.00	69.5	70.1	88.9
21.00-22.00	69.5		
22.00-23.00	69.7		
23.00-00.00	70.0		
00.00-01.00	70.4		
01.00-02.00	70.4		
02.00-03.00	70.4		
03.00-04.00	70.4		
04.00-05.00	70.5	73.3	101.0
05.00-06.00	70.8		
06.00-07.00	70.7		
07.00-08.00	70.8		
08.00-09.00	73.1		
09.00-10.00	74.7		
10.00-11.00	75.0		
11.00-12.00	76.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R24)	ACO	6236	00192036
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	23-24		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	72.2	73.8	97.6
13.00-14.00	73.2		
14.00-15.00	74.5		
15.00-16.00	75.9		
16.00-17.00	74.7		
17.00-18.00	71.6		
18.00-19.00	74.5		
19.00-20.00	72.5		
20.00-21.00	72.7	71.5	90.1
21.00-22.00	72.4		
22.00-23.00	71.8		
23.00-00.00	71.5		
00.00-01.00	71.1		
01.00-02.00	70.9		
02.00-03.00	70.7		
03.00-04.00	70.7		
04.00-05.00	70.9	72.8	97.5
05.00-06.00	71.2		
06.00-07.00	71.4		
07.00-08.00	71.6		
08.00-09.00	74.8		
09.00-10.00	75.0		
10.00-11.00	73.1		
11.00-12.00	72.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R24)	ACO	6236	00192036
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	66.0	70.5	93.8
13.00-14.00	68.3		
14.00-15.00	69.2		
15.00-16.00	72.4		
16.00-17.00	72.2		
17.00-18.00	71.6		
18.00-19.00	70.4		
19.00-20.00	70.3		
20.00-21.00	69.2	66.8	93.4
21.00-22.00	69.6		
22.00-23.00	68.7		
23.00-00.00	66.3		
00.00-01.00	64.0		
01.00-02.00	63.5		
02.00-03.00	63.1		
03.00-04.00	63.5		
04.00-05.00	63.4	71.1	97.1
05.00-06.00	63.6		
06.00-07.00	64.5		
07.00-08.00	70.7		
08.00-09.00	77.1		
09.00-10.00	68.6		
10.00-11.00	71.6		
11.00-12.00	70.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R25)	ACO	6236	00192037
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	18-19		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12.00-13.00	64.6	68.6	96.2
13.00-14.00	66.9		
14.00-15.00	69.1		
15.00-16.00	69.7		
16.00-17.00	72.0		
17.00-18.00	68.4		
18.00-19.00	67.4		
19.00-20.00	66.3		
20.00-21.00	66.0	66.7	70.7
21.00-22.00	65.7		
22.00-23.00	65.9		
23.00-00.00	66.7		
00.00-01.00	67.3		
01.00-02.00	67.8		
02.00-03.00	68.1		
03.00-04.00	65.3		
04.00-05.00	66.8	69.8	95.8
05.00-06.00	67.6		
06.00-07.00	66.6		
07.00-08.00	68.8		
08.00-09.00	70.1		
09.00-10.00	72.8		
10.00-11.00	70.6		
11.00-12.00	70.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R25)	ACO	6236	00192037
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	84.9	82.1	77.9
13.00-14.00	85.5		
14.00-15.00	82.3		
15.00-16.00	83.8		
16.00-17.00	80.4		
17.00-18.00	76.5		
18.00-19.00	75.8		
19.00-20.00	73.3		
20.00-21.00	75.6	75.8	74.6
21.00-22.00	75.3		
22.00-23.00	77.5		
23.00-00.00	75.5		
00.00-01.00	75.8		
01.00-02.00	75.4		
02.00-03.00	76.4		
03.00-04.00	74.0		
04.00-05.00	75.8	79.9	76.9
05.00-06.00	75.9		
06.00-07.00	76.8		
07.00-08.00	79.7		
08.00-09.00	82.0		
09.00-10.00	81.4		
10.00-11.00	81.7		
11.00-12.00	80.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R25)	ACO	6236	00192037
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	20-21		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	65.7	69.7	92.0
13.00-14.00	66.9		
14.00-15.00	69.2		
15.00-16.00	71.4		
16.00-17.00	70.6		
17.00-18.00	71.1		
18.00-19.00	69.3		
19.00-20.00	70.1		
20.00-21.00	68.2	66.3	92.1
21.00-22.00	69.4		
22.00-23.00	67.6		
23.00-00.00	66.4		
00.00-01.00	64.2		
01.00-02.00	63.6		
02.00-03.00	63.2		
03.00-04.00	63.1		
04.00-05.00	63.5	72.5	97.5
05.00-06.00	63.7		
06.00-07.00	64.3		
07.00-08.00	66.7		
08.00-09.00	77.9		
09.00-10.00	73.9		
10.00-11.00	72.6		
11.00-12.00	74.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R25)	ACO	6236	00192037
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	21-22		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	74.2	78.5	96.6
13.00-14.00	76.2		
14.00-15.00	78.9		
15.00-16.00	79.2		
16.00-17.00	82.0		
17.00-18.00	79.2		
18.00-19.00	77.3		
19.00-20.00	76.0	76.2	95.0
20.00-21.00	75.8		
21.00-22.00	75.4		
22.00-23.00	76.6		
23.00-00.00	75.7		
00.00-01.00	75.9		
01.00-02.00	76.7	79.9	102.0
02.00-03.00	76.3		
03.00-04.00	77.1		
04.00-05.00	76.2		
05.00-06.00	76.3		
06.00-07.00	77.4		
07.00-08.00	78.5		
08.00-09.00	79.9		
09.00-10.00	82.2		
10.00-11.00	81.6		
11.00-12.00	82.0		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R25)	ACO	6236	00192037
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	22-23		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	73.6	71.5	97.2
13.00-14.00	74.8		
14.00-15.00	71.5		
15.00-16.00	72.4		
16.00-17.00	69.2		
17.00-18.00	68.5		
18.00-19.00	68.1	66.1	76.6
19.00-20.00	67.2		
20.00-21.00	65.5		
21.00-22.00	65.7		
22.00-23.00	65.1		
23.00-00.00	65.2		
00.00-01.00	66.9	70.2	101.7
01.00-02.00	67.3		
02.00-03.00	66.8		
03.00-04.00	65.9		
04.00-05.00	65.5		
05.00-06.00	66.7		
06.00-07.00	65.5	70.2	101.7
07.00-08.00	70.9		
08.00-09.00	71.9		
09.00-10.00	70.5		
10.00-11.00	71.7		
11.00-12.00	72.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R25)	ACO	6236	00192037
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)

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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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Scientist

2 / 06 / 22

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 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)		
	May 2022		
	23-24		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12.00-13.00	68.6	71.3	97.4
13.00-14.00	70.2		
14.00-15.00	73.3		
15.00-16.00	71.2		
16.00-17.00	70.3		
17.00-18.00	69.0		
18.00-19.00	72.5		
19.00-20.00	72.8		
20.00-21.00	71.6	69.1	98.4
21.00-22.00	72.6		
22.00-23.00	70.6		
23.00-00.00	68.1		
00.00-01.00	66.0		
01.00-02.00	65.7		
02.00-03.00	65.7		
03.00-04.00	65.8		
04.00-05.00	66.0	68.6	95.1
05.00-06.00	66.0		
06.00-07.00	66.2		
07.00-08.00	66.2		
08.00-09.00	71.3		
09.00-10.00	71.4		
10.00-11.00	69.8		
11.00-12.00	66.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R25)	ACO	6236	00192037
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

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(Danit Thongsri) ✓

Scientist

2 / 06 / 22

(Than Chinnong) ✓

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (East Area)		
	May 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	77.8	76.7	92.8
12:00-13:00	75.4		
13:00-14:00	75.7		
14:00-15:00	76.5		
15:00-16:00	78.6		
16:00-17:00	77.0		
17:00-18:00	75.9		
18:00-19:00	75.2		
19:00-20:00	75.3	75.8	86.1
20:00-21:00	75.0		
21:00-22:00	75.2		
22:00-23:00	75.8		
23:00-00:00	76.4		
00:00-01:00	77.1		
01:00-02:00	75.7		
02:00-03:00	75.8		
03:00-04:00	75.7	76.9	89.9
04:00-05:00	76.7		
05:00-06:00	75.6		
06:00-07:00	76.4		
07:00-08:00	76.8		
08:00-09:00	77.3		
09:00-10:00	77.2		
10:00-11:00	78.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R28)	ACO	6236	00192040
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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Scientist

2, 06, 22

Technical Supervisor

2, 06, 22



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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 2 June 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (East Area)		
	May 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	75.7	76.7	88.4
12:00-13:00	74.4		
13:00-14:00	75.7		
14:00-15:00	76.2		
15:00-16:00	76.8		
16:00-17:00	76.4		
17:00-18:00	77.4		
18:00-19:00	79.5	75.9	88.9
19:00-20:00	75.2		
20:00-21:00	75.6		
21:00-22:00	75.9		
22:00-23:00	76.1		
23:00-00:00	77.0		
00:00-01:00	76.1		
01:00-02:00	75.6	76.6	96.5
02:00-03:00	75.7		
03:00-04:00	77.2		
04:00-05:00	75.1		
05:00-06:00	76.4		
06:00-07:00	78.6		
07:00-08:00	75.8		
08:00-09:00	75.5	Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
09:00-10:00	76.5		
10:00-11:00	76.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R28)	ACO	6236	00192040
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

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Sampling Method = Sound Level Meter

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

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(Darin Thongsri)

Scientist

2 / 06 / 22

(Kitti Srithonglor)

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (East Area)		
	May 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	85.3	82.4	95.0
12:00-13:00	82.1		
13:00-14:00	83.6		
14:00-15:00	81.8		
15:00-16:00	80.6		
16:00-17:00	82.3		
17:00-18:00	80.1		
18:00-19:00	81.3		
19:00-20:00	76.4	75.9	88.8
20:00-21:00	75.0		
21:00-22:00	75.7		
22:00-23:00	76.1		
23:00-00:00	76.4		
00:00-01:00	75.9		
01:00-02:00	75.9		
02:00-03:00	75.7		
03:00-04:00	76.2	80.7	94.9
04:00-05:00	77.7		
05:00-06:00	79.6		
06:00-07:00	82.1		
07:00-08:00	82.6		
08:00-09:00	81.9		
09:00-10:00	80.5		
10:00-11:00	81.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R28)	ACO	6236	00192040
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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Scientist
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Technical Supervisor
2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (East Area)		
	May 2022		
	20-21		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:00-12:00	78.1	81.1	96.4
12:00-13:00	75.1		
13:00-14:00	76.6		
14:00-15:00	87.1		
15:00-16:00	77.9		
16:00-17:00	77.7		
17:00-18:00	77.8		
18:00-19:00	82.9		
19:00-20:00	79.0	76.1	91.6
20:00-21:00	75.6		
21:00-22:00	75.4		
22:00-23:00	75.3		
23:00-00:00	75.6		
00:00-01:00	75.3		
01:00-02:00	75.2		
02:00-03:00	75.4		
03:00-04:00	75.6	83.1	95.2
04:00-05:00	75.5		
05:00-06:00	74.6		
06:00-07:00	75.3		
07:00-08:00	83.7		
08:00-09:00	89.7		
09:00-10:00	81.2		
10:00-11:00	82.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R28)	ACO	6236	00192040
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Darin Thongsri) J

Scientist

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(Kitti Srithonglor) /

Technical Supervisor

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Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (East Area)		
	May 2022		
	21-22		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	76.7	78.2	93.7
12:00-13:00	75.2		
13:00-14:00	76.5		
14:00-15:00	80.5		
15:00-16:00	78.5		
16:00-17:00	77.7		
17:00-18:00	77.5		
18:00-19:00	80.2		
19:00-20:00	74.8	74.9	82.9
20:00-21:00	74.7		
21:00-22:00	74.6		
22:00-23:00	74.8		
23:00-00:00	74.9		
00:00-01:00	75.2		
01:00-02:00	74.7		
02:00-03:00	75.6		
03:00-04:00	74.5	77.0	91.0
04:00-05:00	74.4		
05:00-06:00	74.3		
06:00-07:00	76.4		
07:00-08:00	76.9		
08:00-09:00	77.6		
09:00-10:00	78.3		
10:00-11:00	80.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R28)	ACO	6236	00192040
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Darin Thongsri)

Scientist

9 / 06 / 22

(Kitti Srithonglor)

Technical Supervisor

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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (East Area)		
	May 2022		
	22-23		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	77.8	77.4	80.1
12:00-13:00	76.0		
13:00-14:00	77.3		
14:00-15:00	78.0		
15:00-16:00	78.4		
16:00-17:00	77.8		
17:00-18:00	76.6		
18:00-19:00	76.5		
19:00-20:00	75.8	75.4	71.3
20:00-21:00	75.5		
21:00-22:00	76.1		
22:00-23:00	75.4		
23:00-00:00	76.3		
00:00-01:00	75.4		
01:00-02:00	75.3		
02:00-03:00	75.4		
03:00-04:00	75.3	77.0	79.7
04:00-05:00	75.2		
05:00-06:00	75.6		
06:00-07:00	76.0		
07:00-08:00	76.8		
08:00-09:00	77.5		
09:00-10:00	79.0		
10:00-11:00	78.8		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R28)	ACO	6236	00192040
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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Scientist

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Technical Supervisor

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บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
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RY0280/05/65

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Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (East Area)		
	May 2022		
	23-24		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	73.8	75.1	83.4
12:00-13:00	75.3		
13:00-14:00	76.9		
14:00-15:00	78.8		
15:00-16:00	73.3		
16:00-17:00	72.2		
17:00-18:00	72.8		
18:00-19:00	72.5		
19:00-20:00	74.9	71.7	81.2
20:00-21:00	71.1		
21:00-22:00	70.7		
22:00-23:00	71.3		
23:00-00:00	71.0		
00:00-01:00	70.3		
01:00-02:00	71.5		
02:00-03:00	70.6		
03:00-04:00	70.5	77.7	84.6
04:00-05:00	70.7		
05:00-06:00	71.2		
06:00-07:00	70.3		
07:00-08:00	73.6		
08:00-09:00	82.2		
09:00-10:00	80.2		
10:00-11:00	81.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R28)	ACO	6236	00192040
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

(Darin Thongsri)

Scientist

2 / 06 / 22

(Kitti Srithonglor)

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (South Area)		
	May 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	84.9	82.9	95.1
12:00-13:00	82.1		
13:00-14:00	82.6		
14:00-15:00	83.0		
15:00-16:00	83.7		
16:00-17:00	83.2		
17:00-18:00	82.5		
18:00-19:00	78.9		
19:00-20:00	72.0	72.2	91.3
20:00-21:00	71.9		
21:00-22:00	72.1		
22:00-23:00	72.9		
23:00-00:00	72.3		
00:00-01:00	72.5		
01:00-02:00	72.0		
02:00-03:00	71.9		
03:00-04:00	73.6	82.1	94.7
04:00-05:00	76.8		
05:00-06:00	79.0		
06:00-07:00	82.1		
07:00-08:00	81.8		
08:00-09:00	82.2		
09:00-10:00	83.9		
10:00-11:00	86.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R40)	ACO	6236	00192052
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.

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(Danin Thongsri)

Scientist

2 / 06 / 22

(Kitti Sittonglor)

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (South Area)		
	May 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	85.1	83.9	97.3
12:00-13:00	81.5		
13:00-14:00	82.0		
14:00-15:00	83.6		
15:00-16:00	83.2		
16:00-17:00	84.1		
17:00-18:00	85.2	79.3	92.0
18:00-19:00	85.2		
19:00-20:00	80.7		
20:00-21:00	78.7		
21:00-22:00	78.7		
22:00-23:00	78.7		
23:00-00:00	79.6	81.6	94.6
00:00-01:00	79.1		
01:00-02:00	78.9		
02:00-03:00	79.6		
03:00-04:00	78.6		
04:00-05:00	79.8		
05:00-06:00	80.1	81.6	94.6
06:00-07:00	83.0		
07:00-08:00	82.3		
08:00-09:00	82.1		
09:00-10:00	82.4		
10:00-11:00	82.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R40)	ACO	6236	00192052
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Darin Thongsri)

Scientist

2, 06, 22

(Krit Srirongkri)

Technical Supervisor

2, 06, 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (South Area)		
	May 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	79.8	81.8	98.0
12:00-13:00	80.6		
13:00-14:00	81.8		
14:00-15:00	82.1		
15:00-16:00	83.5		
16:00-17:00	82.0		
17:00-18:00	81.5		
18:00-19:00	82.2		
19:00-20:00	79.0	77.5	96.4
20:00-21:00	78.2		
21:00-22:00	77.2		
22:00-23:00	77.1		
23:00-00:00	77.1		
00:00-01:00	77.1		
01:00-02:00	77.0		
02:00-03:00	76.9		
03:00-04:00	77.0	81.4	100.0
04:00-05:00	79.8		
05:00-06:00	80.7		
06:00-07:00	82.3		
07:00-08:00	80.9		
08:00-09:00	81.6		
09:00-10:00	82.5		
10:00-11:00	83.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R40)	ACO	6236	00192052
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

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Sampling Method = Sound Level Meter

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

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Scientist

2 / 06 / 22

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (South Area)		
	May 2022		
	20-21		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	80.1	80.1	84.5
12:00-13:00	79.9		
13:00-14:00	81.5		
14:00-15:00	76.1		
15:00-16:00	79.5		
16:00-17:00	80.7		
17:00-18:00	81.3		
18:00-19:00	79.8		
19:00-20:00	73.3	68.7	83.4
20:00-21:00	67.3		
21:00-22:00	67.1		
22:00-23:00	67.8		
23:00-00:00	67.3		
00:00-01:00	67.2		
01:00-02:00	67.1		
02:00-03:00	67.6		
03:00-04:00	67.3	73.9	73.3
04:00-05:00	65.8		
05:00-06:00	70.2		
06:00-07:00	71.9		
07:00-08:00	73.8		
08:00-09:00	75.2		
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_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R40)	ACO	6236	00192052
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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Scientist

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(Kitti Srithonglor) /

Technical Supervisor

2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (South Area)				
	May 2022				
	21-22				
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]		
11:00-12:00	81.4	80.7	101.5		
12:00-13:00	80.3				
13:00-14:00	81.7				
14:00-15:00	80.2				
15:00-16:00	81.3				
16:00-17:00	81.5				
17:00-18:00	79.5				
18:00-19:00	78.6				
19:00-20:00	77.1	76.9	97.2		
20:00-21:00	76.3				
21:00-22:00	77.9				
22:00-23:00	75.2				
23:00-00:00	76.3				
00:00-01:00	77.8				
01:00-02:00	76.9				
02:00-03:00	76.9				
03:00-04:00	79.0	81.1	90.8		
04:00-05:00	77.2				
05:00-06:00	79.8				
06:00-07:00	80.3				
07:00-08:00	81.1				
08:00-09:00	82.6				
09:00-10:00	82.9				
10:00-11:00	83.1				
Standard		Less Than 90.0		Less Than 140.0 ^[1] , 115.0 ^[2]	
Sound Level Meter Data					
Calibrate Sheet No.: Noise R_243/22			16 May 2022		
Equipment		Brand	Model	Serial No.	
Sound Level Meter (No.R40)		ACO	6236	00192052	
Actual Reading [dB]			After Adjustment		
Before Adjustment			After Adjustment		
94.0			94.0		

Remark:

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Sampling Method = Sound Level Meter

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

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(Darin Thongsri)

Scientist

2 / 06 / 22

Technical Supervisor

2 / 06 / 22



RY0280/05/65

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 : 17-24 May 2022
Date Reported : 2 June 2022

Time	DHT Area (South Area)		
	May 2022		
	22-23		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	82.9	83.4	95.6
12:00-13:00	81.8		
13:00-14:00	82.6		
14:00-15:00	83.4		
15:00-16:00	86.2		
16:00-17:00	84.3		
17:00-18:00	83.3		
18:00-19:00	80.1		
19:00-20:00	72.3	71.9	85.3
20:00-21:00	71.9		
21:00-22:00	71.3		
22:00-23:00	72.0		
23:00-00:00	72.1		
00:00-01:00	72.0		
01:00-02:00	71.9		
02:00-03:00	72.0		
03:00-04:00	70.9	81.2	93.4
04:00-05:00	73.1		
05:00-06:00	79.8		
06:00-07:00	80.9		
07:00-08:00	82.1		
08:00-09:00	83.1		
09:00-10:00	83.4		
10:00-11:00	83.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R40)	ACO	6236	00192052
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Darin Thongsri)

Scientist

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Technical Supervisor

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S.P.S. CONSULTING SERVICE CO., LTD.
7 ซอยพหลโยธิน 24 ถนนพหลโยธิน แขวงจอมพล เขตจตุจักร กรุงเทพฯ 10900
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Tel : (662) 939-4370-72, Fax : (662) 513-4221, E-mail : sale@spscon.com., www.spscon.com

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (South Area)		
	May 2022		
	23-24		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	77.9	77.8	95.4
12:00-13:00	76.9		
13:00-14:00	77.4		
14:00-15:00	78.8		
15:00-16:00	77.4		
16:00-17:00	78.6		
17:00-18:00	77.9		
18:00-19:00	77.1	77.4	91.4
19:00-20:00	76.3		
20:00-21:00	77.6		
21:00-22:00	77.1		
22:00-23:00	76.9		
23:00-00:00	77.0		
00:00-01:00	76.8	81.3	95.1
01:00-02:00	76.7		
02:00-03:00	79.7		
03:00-04:00	78.8		
04:00-05:00	79.9		
05:00-06:00	80.0		
06:00-07:00	82.1		
07:00-08:00	81.0		
08:00-09:00	82.3		
09:00-10:00	81.9		
10:00-11:00	82.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R40)	ACO	6236	00192052
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Darin Thongsri) J

Scientist

2 / 06 / 22

(Kitti Srithonglor) /

Technical Supervisor

2 / 06 / 22



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

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (West Area)		
	May 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	84.3	85.9	92.5
12:00-13:00	83.8		
13:00-14:00	81.6		
14:00-15:00	85.9		
15:00-16:00	87.4		
16:00-17:00	87.7		
17:00-18:00	87.5		
18:00-19:00	85.9		
19:00-20:00	77.0	77.2	92.9
20:00-21:00	76.9		
21:00-22:00	77.9		
22:00-23:00	77.1		
23:00-00:00	77.3		
00:00-01:00	77.1		
01:00-02:00	77.0		
02:00-03:00	77.1		
03:00-04:00	73.6	81.8	101.0
04:00-05:00	75.9		
05:00-06:00	79.9		
06:00-07:00	80.3		
07:00-08:00	81.6		
08:00-09:00	84.2		
09:00-10:00	85.3		
10:00-11:00	83.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R07)	ACO	6236	00152080
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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(Darin Thongsri)

Scientist

2 / 06 / 22

(Kitti Shunonglor)

Technical Supervisor

2 / 06 / 22



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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

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (West Area)		
	May 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	82.1	82.7	97.7
12:00-13:00	81.7		
13:00-14:00	81.9		
14:00-15:00	84.8		
15:00-16:00	82.8		
16:00-17:00	82.3		
17:00-18:00	82.4		
18:00-19:00	82.5		
19:00-20:00	81.6	79.1	85.3
20:00-21:00	80.6		
21:00-22:00	79.3		
22:00-23:00	78.8		
23:00-00:00	76.4		
00:00-01:00	77.2		
01:00-02:00	78.1		
02:00-03:00	78.6		
03:00-04:00	79.3	82.0	88.6
04:00-05:00	78.9		
05:00-06:00	80.1		
06:00-07:00	82.8		
07:00-08:00	82.5		
08:00-09:00	83.5		
09:00-10:00	82.8		
10:00-11:00	83.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R07)	ACO	6236	00152080
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.

(Darin Thongsri)

Scientist

2 / 06 / 22

Technical Supervisor

2 / 06 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (West Area)		
	May 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	82.5	83.3	103.9
12:00-13:00	82.1		
13:00-14:00	83.5		
14:00-15:00	83.3		
15:00-16:00	84.4		
16:00-17:00	84.6		
17:00-18:00	84.4		
18:00-19:00	80.2	74.0	96.4
19:00-20:00	76.1		
20:00-21:00	75.3		
21:00-22:00	74.6		
22:00-23:00	72.6		
23:00-00:00	71.9		
00:00-01:00	72.8		
01:00-02:00	73.6		
02:00-03:00	72.9	82.0	97.2
03:00-04:00	76.8		
04:00-05:00	79.1		
05:00-06:00	80.3		
06:00-07:00	82.7		
07:00-08:00	81.6		
08:00-09:00	82.5		
09:00-10:00	83.6		
10:00-11:00	84.7		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R07)	ACO	6236	00152080
		Standard	IEC 61672
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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

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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.

(Darin Thongsri)

Scientist

2, 06, 22

(Rita Shuanglert)

Technical Supervisor

2, 06, 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (West Area)			
	May 2022			
	20-21			
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]		L _{max} [dB(A)]
11:00-12:00	84.8	88.2		102.0
12:00-13:00	84.6			
13:00-14:00	82.6			
14:00-15:00	84.3			
15:00-16:00	81.1			
16:00-17:00	80.9			
17:00-18:00	81.3			
18:00-19:00	80.1			
19:00-20:00	77.5	73.8		88.8
20:00-21:00	76.4			
21:00-22:00	73.6			
22:00-23:00	6.0			
23:00-00:00	76.3			
00:00-01:00	68.9			
01:00-02:00	69.3			
02:00-03:00	70.1			
03:00-04:00	69.8	82.1		96.4
04:00-05:00	67.5			
05:00-06:00	71.3			
06:00-07:00	76.8			
07:00-08:00	80.1			
08:00-09:00	82.3			
09:00-10:00	85.6			
10:00-11:00	87.7			
Standard		Less Than 90.0		Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data				
Calibrate Sheet No.: Noise R_243/22			16 May 2022	
Equipment	Brand	Model	Serial No.	Standard
Sound Level Meter (No.R07)	ACO	6236	00152080	IEC 61672
Actual Reading [dB]				
Before Adjustment			After Adjustment	
94.0			94.0	

Remark:

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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.

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(Darin Thongsri) /
Scientist
2, 06, 22

Technical Supervisor
2, 06, 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (West Area)		
	May 2022		
	21-22		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	84.3	82.3	95.0
12:00-13:00	82.4		
13:00-14:00	81.7		
14:00-15:00	81.8		
15:00-16:00	82.5		
16:00-17:00	81.9		
17:00-18:00	82.3		
18:00-19:00	80.3		
19:00-20:00	79.8	73.8	85.6
20:00-21:00	75.3		
21:00-22:00	71.6		
22:00-23:00	69.7		
23:00-00:00	70.3		
00:00-01:00	71.1		
01:00-02:00	68.7		
02:00-03:00	69.3		
03:00-04:00	68.1	80.2	95.7
04:00-05:00	69.9		
05:00-06:00	73.8		
06:00-07:00	79.6		
07:00-08:00	81.5		
08:00-09:00	82.0		
09:00-10:00	82.9		
10:00-11:00	83.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R07)	ACO	6236	00152080
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

Scientist

2, 06, 21

Technical Supervisor

2, 06, 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (West Area)		
	May 2022		
	22-23		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
11:00-12:00	81.8	83.3	99.6
12:00-13:00	81.7		
13:00-14:00	83.6		
14:00-15:00	81.9		
15:00-16:00	82.4		
16:00-17:00	82.8		
17:00-18:00	82.2		
18:00-19:00	86.8		
19:00-20:00	78.5	76.4	82.9
20:00-21:00	76.3		
21:00-22:00	77.6		
22:00-23:00	76.8		
23:00-00:00	75.4		
00:00-01:00	76.8		
01:00-02:00	74.3		
02:00-03:00	73.6		
03:00-04:00	73.8	80.2	94.8
04:00-05:00	71.6		
05:00-06:00	76.5		
06:00-07:00	79.8		
07:00-08:00	81.6		
08:00-09:00	82.3		
09:00-10:00	82.6		
10:00-11:00	82.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R07)	ACO	6236	00152080
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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

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Scientist

2, 06, 22

Technical Supervisor

2, 06, 22



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7/7

RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Mueang, Rayong 21000 Date Reported : 2 June 2022
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (West Area)		
	May 2022		
	23-24		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
11:00-12:00	87.0	86.3	93.7
12:00-13:00	86.5		
13:00-14:00	86.7		
14:00-15:00	87.1		
15:00-16:00	87.0		
16:00-17:00	86.9		
17:00-18:00	86.3		
18:00-19:00	79.6		
19:00-20:00	78.6	74.8	90.4
20:00-21:00	76.2		
21:00-22:00	75.8		
22:00-23:00	74.1		
23:00-00:00	73.6		
00:00-01:00	70.8		
01:00-02:00	71.6		
02:00-03:00	72.3		
03:00-04:00	71.1	81.9	94.7
04:00-05:00	68.9		
05:00-06:00	72.8		
06:00-07:00	79.6		
07:00-08:00	80.1		
08:00-09:00	82.6		
09:00-10:00	84.3		
10:00-11:00	87.5		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R07)	ACO	6236	00152080
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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(Darin Thongsri)

Scientist

2, 06, 22

Technical Supervisor

2, 06, 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (North Area)		
	May 2022		
	17-18		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	80.9	81.3	93.5
13:00-14:00	82.6		
14:00-15:00	81.3		
15:00-16:00	83.4		
16:00-17:00	82.1		
17:00-18:00	80.1		
18:00-19:00	79.3		
19:00-20:00	78.6	74.3	87.4
20:00-21:00	79.3		
21:00-22:00	76.4		
22:00-23:00	71.1		
23:00-00:00	72.3		
00:00-01:00	72.6		
01:00-02:00	70.8		
02:00-03:00	71.6		
03:00-04:00	69.8	81.3	91.7
04:00-05:00	73.6		
05:00-06:00	78.9		
06:00-07:00	80.6		
07:00-08:00	82.3		
08:00-09:00	81.9		
09:00-10:00	83.4		
10:00-11:00	82.1		
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_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
Standard			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

Reported results refer to measurement time only.

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Scientist

2 / 06 / 22

(Kitti Srithonglor)

Technical Supervisor

2 / 06 / 22



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
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2/7

RY0280/05/65

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 : 17-24 May 2022
Date Reported : 2 June 2022

Time	DHT Area (North Area)		
	May 2022		
	18-19		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	79.3	80.3	98.2
13:00-14:00	80.3		
14:00-15:00	77.6		
15:00-16:00	81.3		
16:00-17:00	82.1		
17:00-18:00	80.3		
18:00-19:00	80.9		
19:00-20:00	79.5		
20:00-21:00	76.4	72.4	85.9
21:00-22:00	73.1		
22:00-23:00	72.5		
23:00-00:00	71.8		
00:00-01:00	70.6		
01:00-02:00	69.8		
02:00-03:00	69.5		
03:00-04:00	70.8		
04:00-05:00	73.4	81.3	91.7
05:00-06:00	79.6		
06:00-07:00	80.0		
07:00-08:00	81.4		
08:00-09:00	82.3		
09:00-10:00	81.6		
10:00-11:00	82.4		
11:00-12:00	83.9		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
Standard			
IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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.

Scientist

2, 06, 22

(Kitti Shunonglor)

Technical Supervisor

2, 06, 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (North Area)		
	May 2022		
	19-20		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	84.8	84.7	102.0
13:00-14:00	84.4		
14:00-15:00	85.3		
15:00-16:00	85.5		
16:00-17:00	86.1		
17:00-18:00	85.5		
18:00-19:00	83.2		
19:00-20:00	80.4		
20:00-21:00	79.8	74.9	95.1
21:00-22:00	77.6		
22:00-23:00	73.4		
23:00-00:00	72.1		
00:00-01:00	74.3		
01:00-02:00	70.6		
02:00-03:00	68.2		
03:00-04:00	69.4		
04:00-05:00	70.8	82.4	97.2
05:00-06:00	72.6		
06:00-07:00	76.8		
07:00-08:00	80.6		
08:00-09:00	82.8		
09:00-10:00	83.1		
10:00-11:00	85.6		
11:00-12:00	86.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
		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.

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Scientist
2 / 06 / 22



(Kitti Srithonglor) /
Technical Supervisor
2 / 06 / 22



RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (North Area)		
	May 2022		
	20-21		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	87.3	86.3	96.4
13:00-14:00	86.4		
14:00-15:00	87.3		
15:00-16:00	87.4		
16:00-17:00	87.7		
17:00-18:00	87.7		
18:00-19:00	80.6		
19:00-20:00	77.3		
20:00-21:00	79.8	74.9	91.4
21:00-22:00	77.3		
22:00-23:00	72.1		
23:00-00:00	70.9		
00:00-01:00	71.6		
01:00-02:00	71.8		
02:00-03:00	73.6		
03:00-04:00	71.9		
04:00-05:00	73.9	83.5	92.4
05:00-06:00	78.6		
06:00-07:00	80.1		
07:00-08:00	82.3		
08:00-09:00	84.6		
09:00-10:00	83.9		
10:00-11:00	85.4		
11:00-12:00	87.3		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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

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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.

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Technical Supervisor

2 / 06 / 22



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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

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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (North Area)		
	May 2022		
	21-22		
	L_{eq} 1 hr [dB(A)]	L_{eq} 8 hr [dB(A)]	L_{max} [dB(A)]
12:00-13:00	80.1	81.3	99.5
13:00-14:00	79.3		
14:00-15:00	82.6		
15:00-16:00	83.7		
16:00-17:00	80.5		
17:00-18:00	82.8		
18:00-19:00	80.1		
19:00-20:00	78.3		
20:00-21:00	75.8	71.4	81.9
21:00-22:00	72.2		
22:00-23:00	70.6		
23:00-00:00	69.9		
00:00-01:00	68.7		
01:00-02:00	69.2		
02:00-03:00	68.8		
03:00-04:00	70.3		
04:00-05:00	74.6	81.9	92.5
05:00-06:00	78.3		
06:00-07:00	80.1		
07:00-08:00	82.8		
08:00-09:00	81.9		
09:00-10:00	84.5		
10:00-11:00	83.8		
11:00-12:00	82.6		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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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

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(Krit Shinnongtor)

Technical Supervisor

2, 06, 22



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RY0280/05/65

R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (North Area)		
	May 2022		
	22-23		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	80.5	80.1	95.8
13:00-14:00	79.3		
14:00-15:00	80.5		
15:00-16:00	81.3		
16:00-17:00	80.6		
17:00-18:00	79.8		
18:00-19:00	79.6		
19:00-20:00	79.2		
20:00-21:00	76.3	72.6	72.0
21:00-22:00	73.9		
22:00-23:00	72.6		
23:00-00:00	70.7		
00:00-01:00	70.9		
01:00-02:00	72.2		
02:00-03:00	69.8		
03:00-04:00	70.6		
04:00-05:00	71.3	81.7	85.1
05:00-06:00	73.6		
06:00-07:00	78.1		
07:00-08:00	81.6		
08:00-09:00	84.3		
09:00-10:00	82.7		
10:00-11:00	83.6		
11:00-12:00	84.2		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
		Standard	
		IEC 61672	
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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

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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

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R-Pro-1010-4/2021

Noise Level Report

Project : Ultra Clean Fule (UCF) Diesel Euro V Sampling Date : 17-24 May 2022
Project Location : 299 Moo 5, Sukhumvit Road, Choeng Noen, Date Reported : 2 June 2022
Mueang, Rayong 21000
Client Name/Address : Hyundai Engineering Company
Sampling By : S.P.S. Consulting Service Co., Ltd.

Time	DHT Area (North Area)		
	May 2022		
	23-24		
	L _{eq} 1 hr [dB(A)]	L _{eq} 8 hr [dB(A)]	L _{max} [dB(A)]
12:00-13:00	80.1	81.7	98.4
13:00-14:00	82.8		
14:00-15:00	83.6		
15:00-16:00	81.9		
16:00-17:00	80.3		
17:00-18:00	82.6		
18:00-19:00	80.9		
19:00-20:00	79.6		
20:00-21:00	78.3	74.3	90.6
21:00-22:00	77.9		
22:00-23:00	74.4		
23:00-00:00	73.9		
00:00-01:00	71.1		
01:00-02:00	69.9		
02:00-03:00	68.3		
03:00-04:00	66.7		
04:00-05:00	69.3	79.9	104.6
05:00-06:00	70.8		
06:00-07:00	72.9		
07:00-08:00	79.6		
08:00-09:00	80.4		
09:00-10:00	82.6		
10:00-11:00	81.7		
11:00-12:00	83.1		
Standard		Less Than 90.0	Less Than 140.0 ^[1] , 115.0 ^[2]
Sound Level Meter Data			
Calibrate Sheet No.: Noise R_243/22		16 May 2022	
Equipment	Brand	Model	Serial No.
Sound Level Meter (No.R44)	ACO	6236	00192056
Standard IEC 61672			
Actual Reading [dB]			
Before Adjustment		After Adjustment	
94.0		94.0	

Remark:

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Sampling Method = Sound Level Meter

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

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