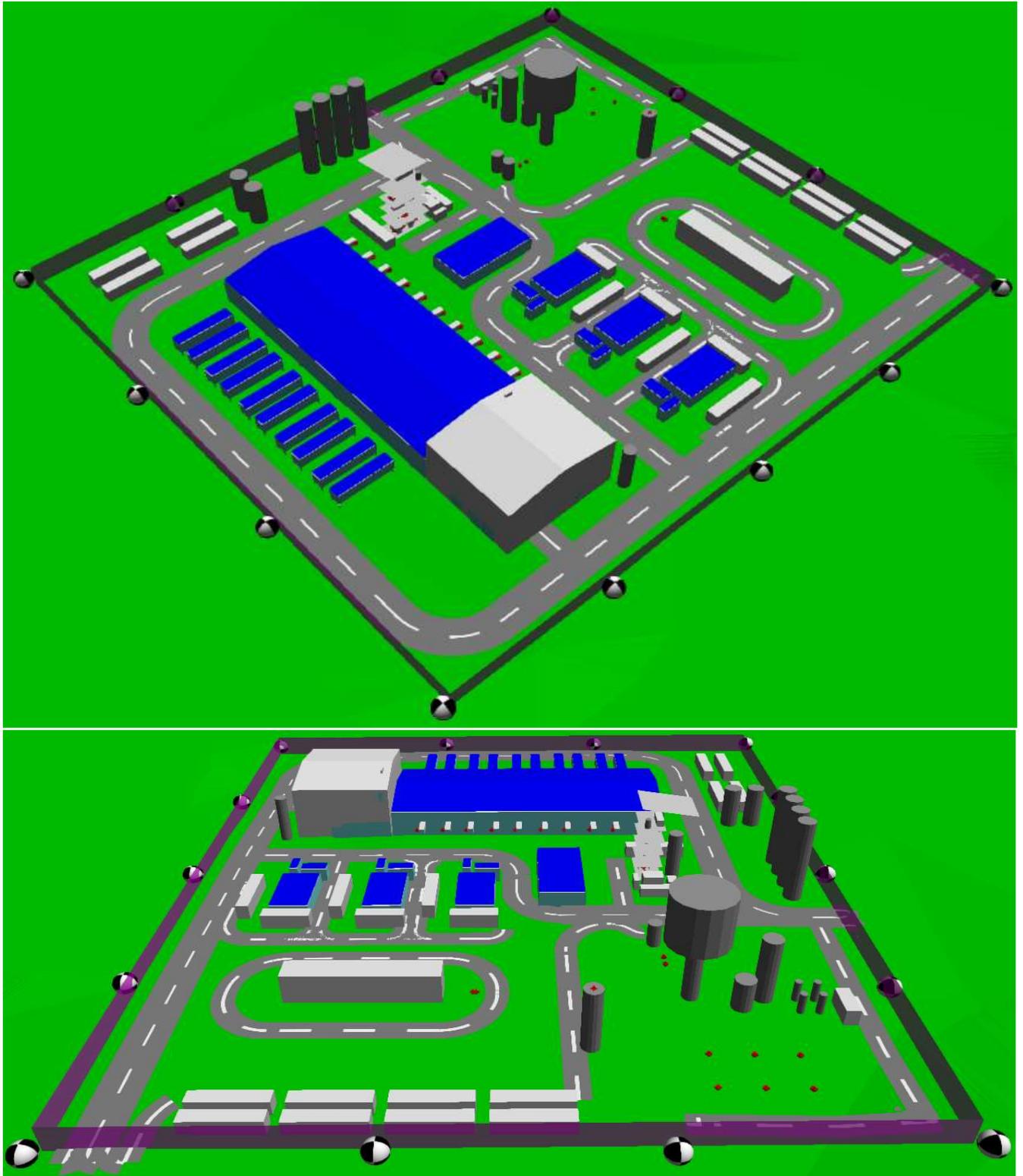


Project Reykjanes	Concept PtX Facility	Project.No. 5390104	Date 26.05.23	Revision Rev 0
Subject Noise Propagation Calculation		Status FIO Only	author, department X. Chen, PSPT	

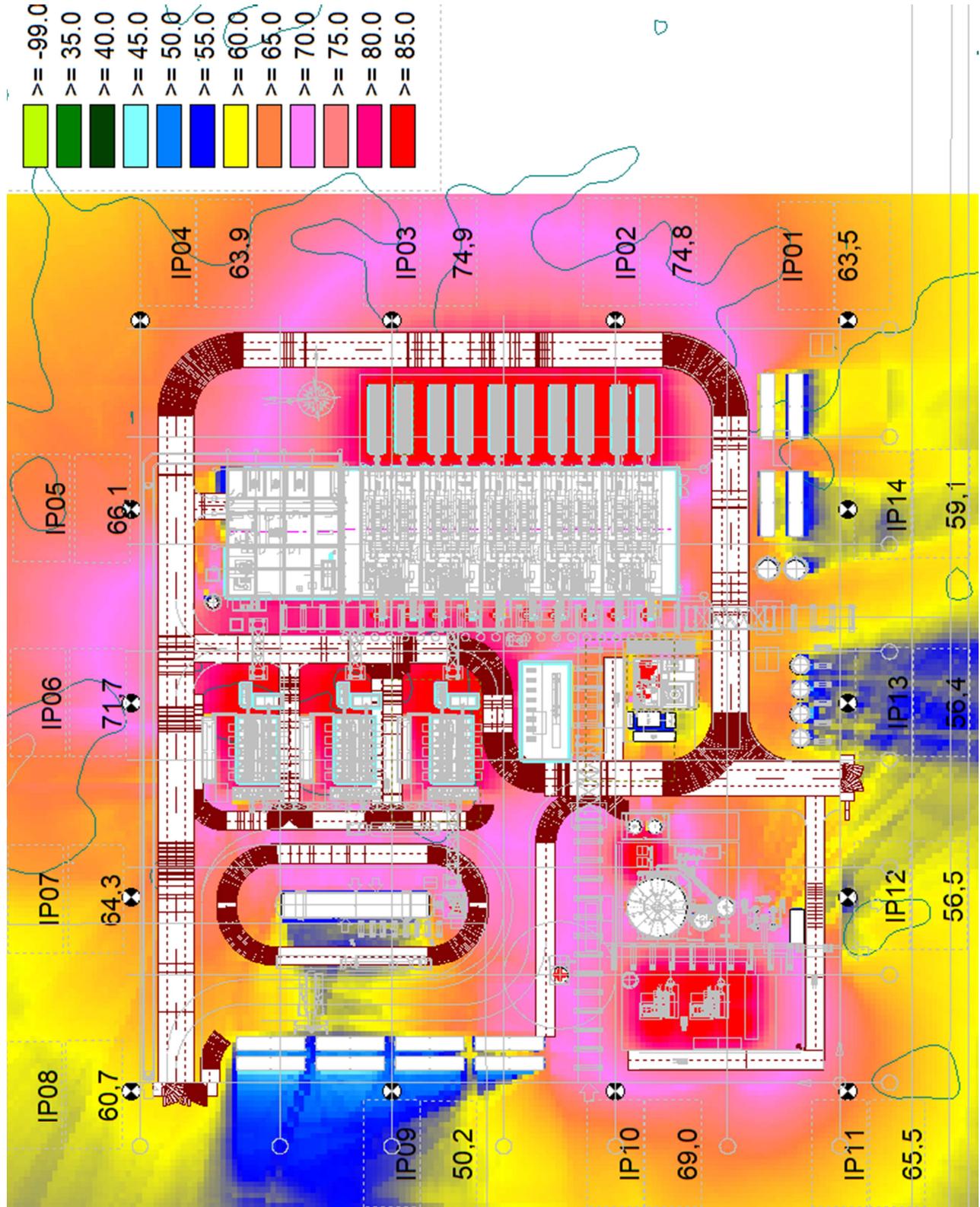
3D REPRESENTATION of NEW FACILITY



Project Reykjanes	Concept PtX Facility	Project.No. 5390104	Date 26.05.23	Revision Rev 0
Subject Noise Propagation Calculation		Status FIO Only	author, department X. Chen, PSPT	

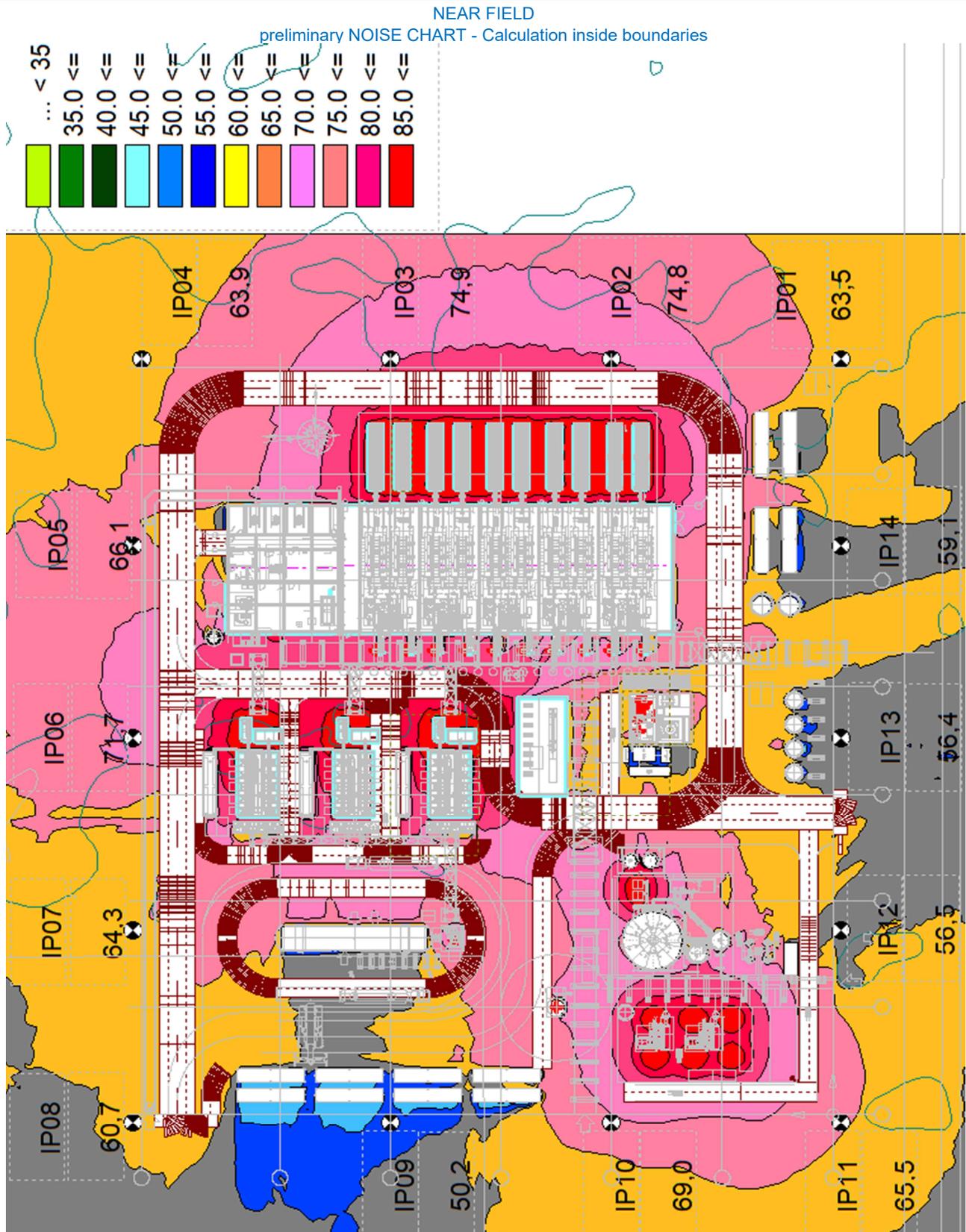
NEAR FIELD

preliminary NOISE CHART - Calculation inside boundaries



- Calculation done for PtX Plant at nominal load and normal operation (e.g. safety valves, blow out etc not in operation)
- Background noise and surrounding terrain / buildings / structures not considered
- Preliminary calculation done by considering all main structures of the PtX Plant

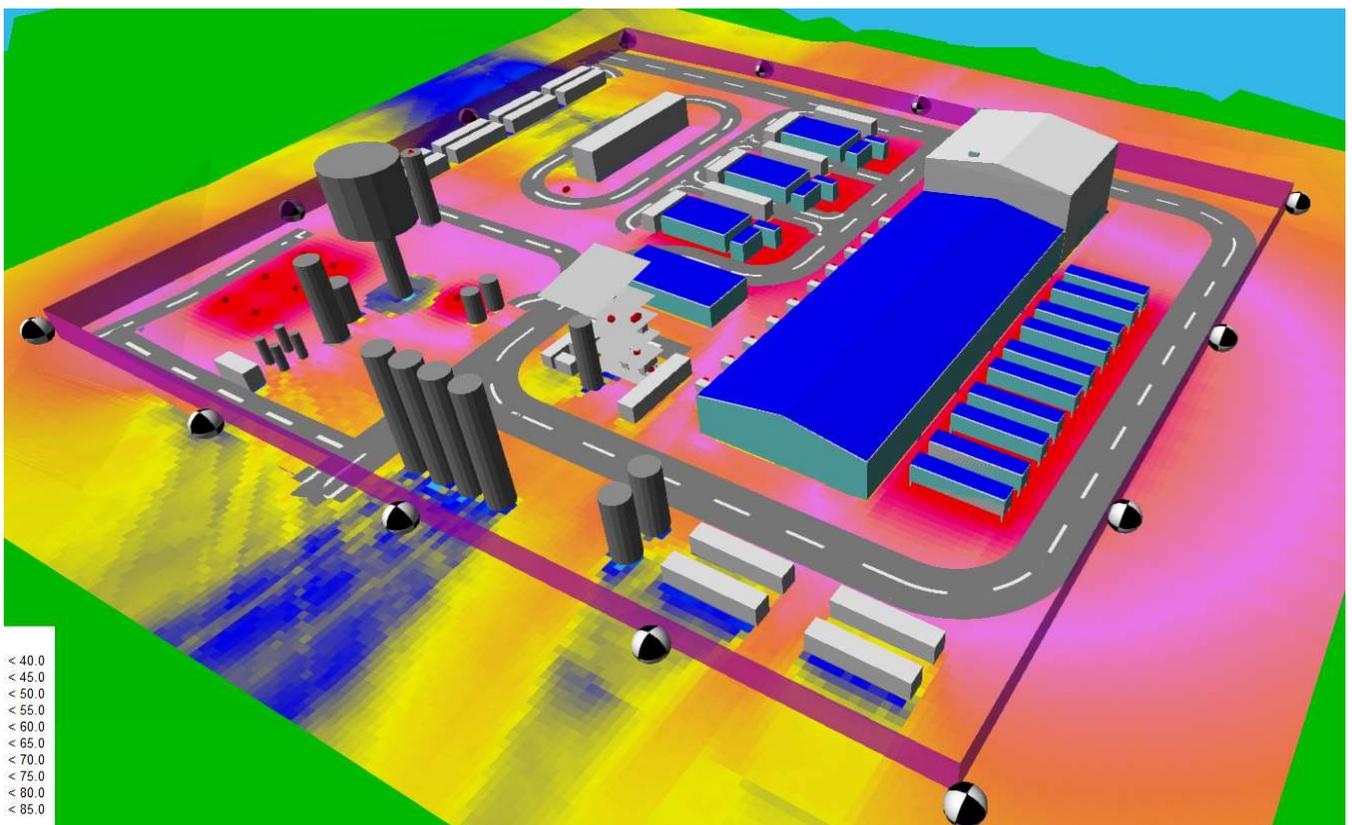
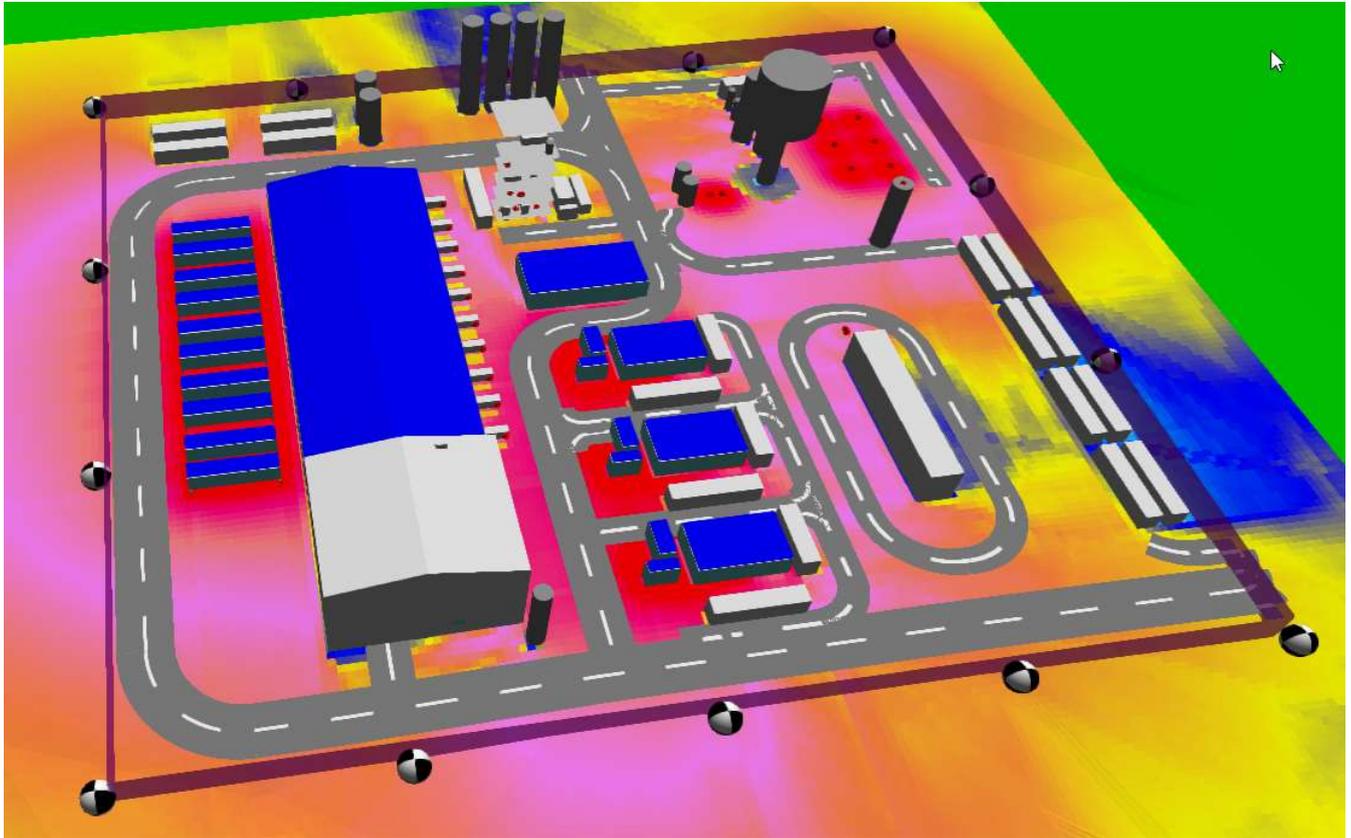
Project Reykjanes	Concept PtX Facility	Project.No. 5390104	Date 26.05.23	Revision Rev 0
Subject Noise Propagation Calculation		Status FIO Only	author, department X. Chen, PSPT	



- Calculation done for PtX Plant at nominal load and normal operation (e.g. safety valves, blow out etc not in operation)
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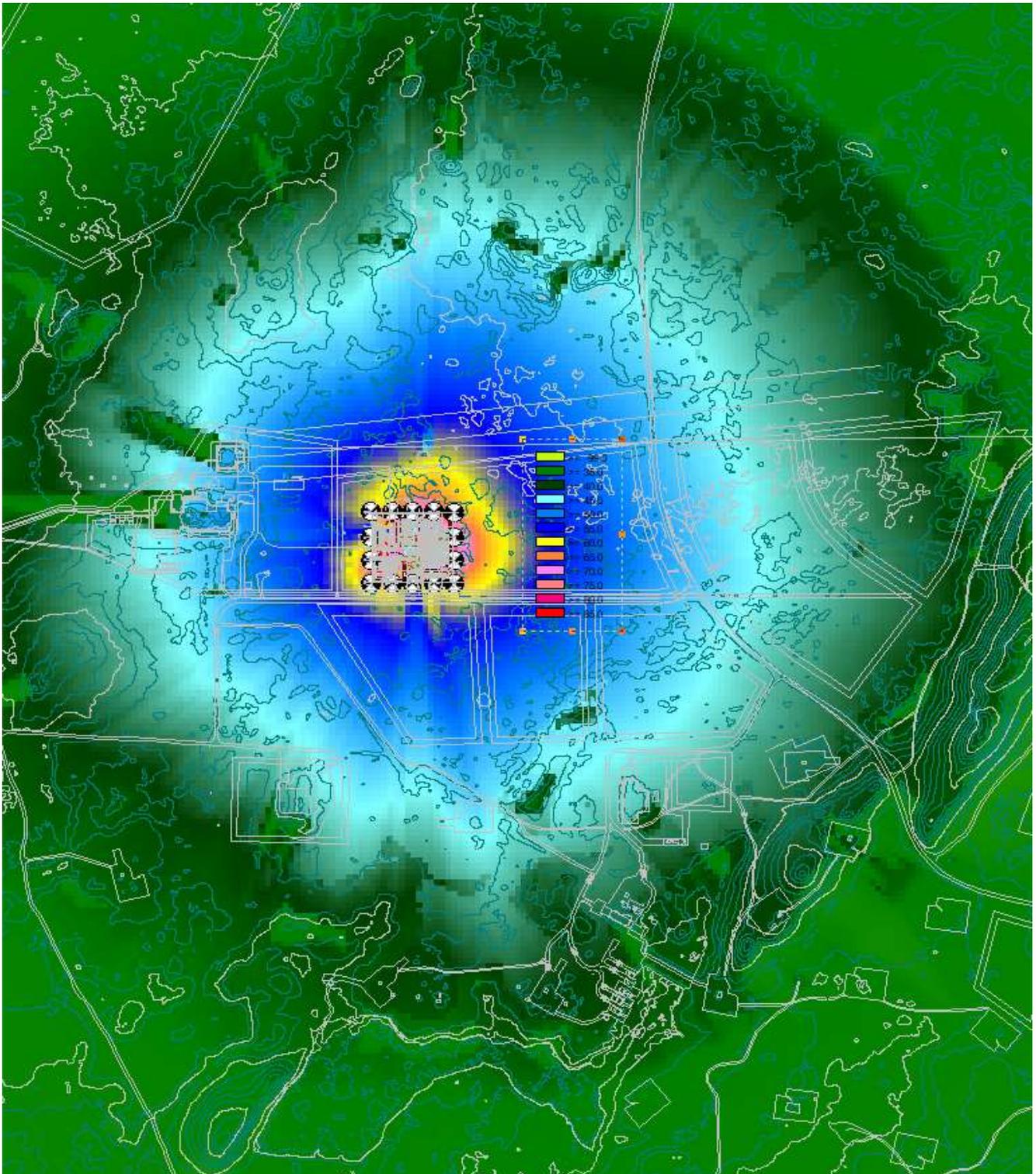
Project Reykjanes	Concept PtX Facility	Project.No. 5390104	Date 26.05.23	Revision Rev 0
Subject Noise Propagation Calculation		Status FIO Only	author, department X. Chen, PSPT	

NEAR FIELD
3D REPRESENTATION of NEW FACILITY



Project Reykjanes	Concept PtX Facility	Project.No. 5390104	Date 26.05.23	Revision Rev 0
Subject Noise Propagation Calculation		Status FIO Only	author, department X. Chen, PSPT	

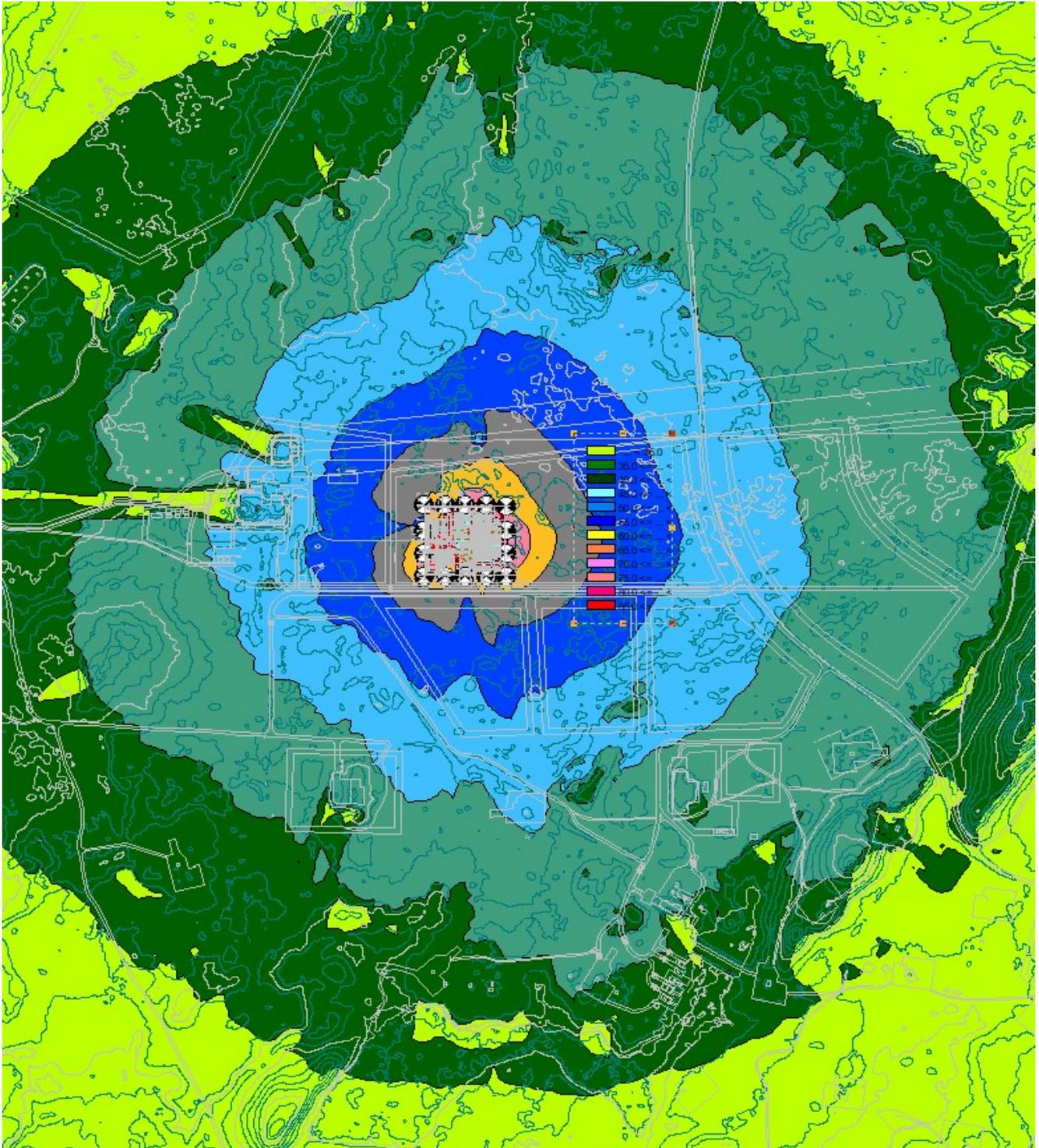
FAR FIELD
preliminary NOISE CHART - Calculation of Far Field situation



- Calculation done for PtX Plant at nominal load and normal operation (e.g. safety valves, blow out etc not in operation)
- Background noise and surrounding terrain / buildings / structures not considered
- Preliminary calculation done by considering all main structures of the PtX Plant

Project Reykjanes	Concept PtX Facility	Project.No. 5390104	Date 26.05.23	Revision Rev 0
Subject Noise Propagation Calculation		Status FIO Only	author, department X. Chen, PSPT	

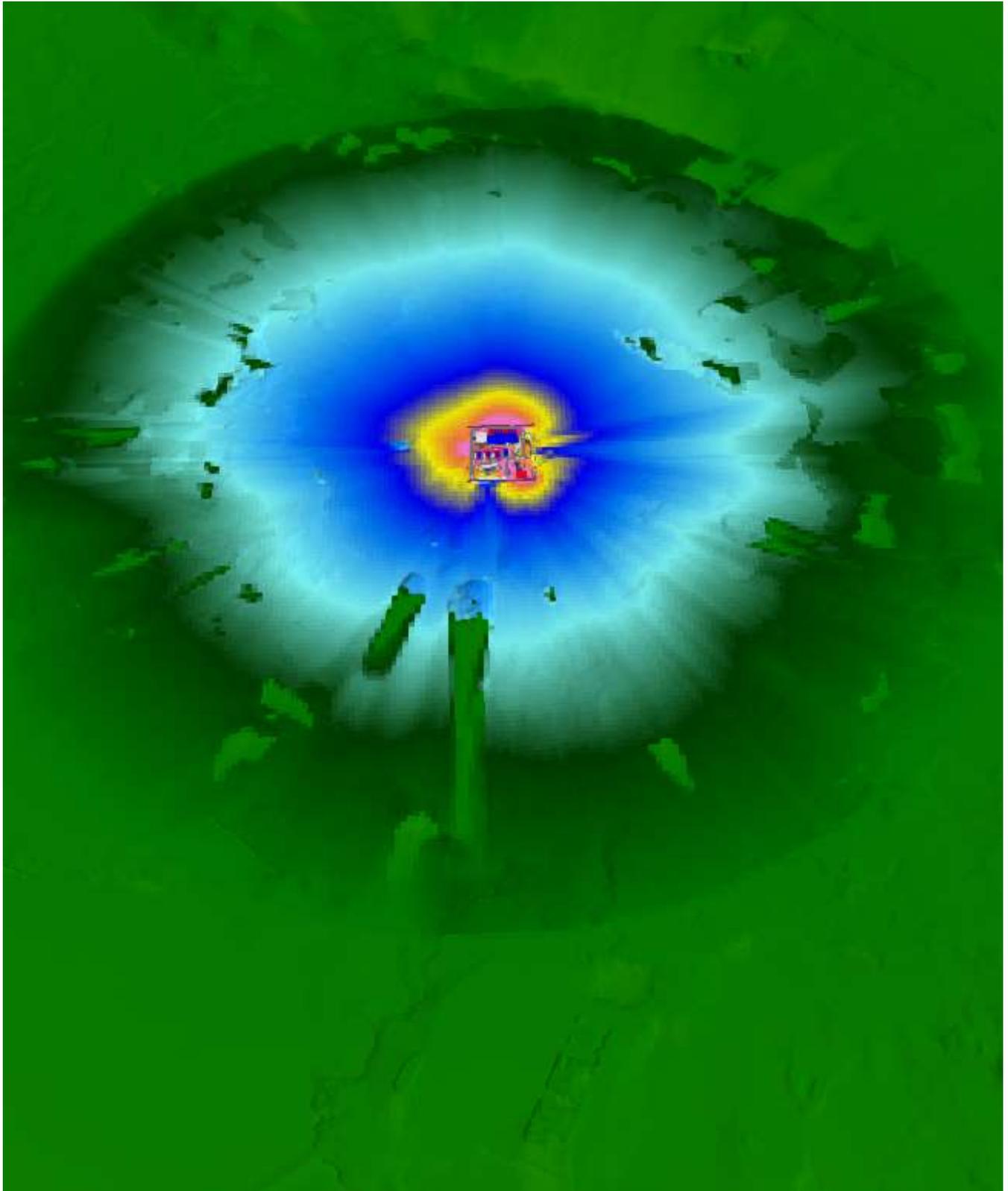
FAR FIELD
preliminary NOISE CHART - Calculation inside boundaries



- Calculation done for PtX Plant at nominal load and normal operation (e.g. safety valves, blow out etc not in operation)
- Background noise and surrounding terrain / buildings / structures not considered
- Preliminary calculation done by considering all main structures of the PtX Plant

Project Reykjanes	Engine Configuration PtX Facility	Project.No. 5390104	Date 26.05.23	Revision Rev 0
Subject Noise Propagation Calculation		Status FIO Only	author, department X. Chen, PSPT	

FAR FIELD
3D REPRESENTATION of NEW FACILITY



Project Reykjanes	Engine Configuration PtX Facility	Project.No. 5390104	Date 26.05.23	Revision Rev 0
Subject Noise Propagation Calculation		Status FIO Only	author, department X. Chen, PSPT	

Immission Levels

Noise Propagation Calculation of 26.05.2023 - Rev 0

Receiver	Limit	DPP contribution	Background Noise	Total Noise		Remarks
[dB(A)]						
IP_01	n. a.	63,5	n. c.	63,5		
IP_02	n. a.	74,8	n. c.	74,8		
IP_03	n. a.	74,9	n. c.	74,9		
IP_04	n. a.	63,9	n. c.	63,9		
IP_05	n. a.	66,1	n. c.	66,1		
IP_06	n. a.	71,7	n. c.	71,7		
IP_07	n. a.	64,3	n. c.	64,3		
IP_08	n. a.	60,7	n. c.	60,7		
IP_09	n. a.	50,2	n. c.	50,2		
IP_10	n. a.	69,0	n. c.	69,0		
IP_11	n. a.	65,5	n. c.	65,5		
IP_12	n. a.	56,5	n. c.	56,5		
IP_13	n. a.	56,4	n. c.	56,4		
IP_14	n. a.	59,1	n. c.	59,1		

- Calculation done for PtX Plant at nominal load and normal operation (e.g. safety valves, blow out etc not in operation)
- Background noise and surrounding terrain / buildings / structures not considered
- Preliminary calculation done by considering all main structures of the PtX Plant

n.a. = not applicable

n.c. = not considered

Tolerance ± 5%

Project Reykjanes	Engine Configuration PtX Facility	Project.No. 5390104	Date 26.05.23	Revision Rev 0
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PRELIMINARY ACOUSTICAL CHARACTERISTICS of MAIN EQUIPMENT and BUILDINGS

number per unit	total per plant	attenuation of silencers	damping (Rw)	net emission LpA	net emission LwA	Remarks
[-]	[-]	[dB]	[dB]	[dB(A)]	[dB(A)]	
SOUND SOURCES - Methanation Plant						
Condensate Pump						
1	2x 100%	n.a.	n.a.	n.a.	68	per pump
Sewage Water Pump						
1	2x 100%	n.a.	n.a.	n.a.	80	per pump
Start-Up Pump						
1	1	n.a.	n.a.	n.a.	80	per pump
HP Feed Water Pump						
1	2x 100%	n.a.	n.a.	n.a.	89	per pump
LP Feed Water Pump						
1	2x 100%	n.a.	n.a.	n.a.	68	per pump
Chemical Dosing Pump						
1	2x 100%	n.a.	n.a.	n.a.	90	per pump
SOUND SOURCES - Bio Reactor						
Recirculation Centrifugal Pump						
1	2x 100%	n.a.	n.a.	n.a.	98	per pump
SOUND SOURCES - Liquifacation Unit						
Liquifacation Unit - Upper Surface						
1	3	n.a.	n.a.	n.a.	101	per module
Liquifacation Unit - Vertical Surface						
1	3	n.a.	n.a.	n.a.	103	per module
Cooling Water Pump Container - Upper Surface						
1	3	n.a.	n.a.	n.a.	98	per module
Cooling Water Pump Container - Vertical Surface						
1	3	n.a.	n.a.	n.a.	104	per module
Liquifacation Compressor Container - Upper Surface						
1	3	n.a.	n.a.	n.a.	100	per module
Liquifacation Compressor Container - Vertical Surface						
1	3	n.a.	n.a.	n.a.	105	per module
SOUND SOURCES - LNG						
LNG Pump						
1	2x 100%	n.a.	n.a.	n.a.	80	per pump
SOUND SOURCES - CO2 Gas Treatment						
CO2 Compressor						
4	6x 25%	n.a.	n.a.	n.a.	102	per compressor
SOUND SOURCES - Electrolysis Building						
H2.Enclosure.Vent.Outlet						
1	5	n.a.	n.a.	n.a.	62	per compressor
EH1.Vent.Outlet						
1	5	n.a.	n.a.	n.a.	62	per compressor
EH1.Enclosure.Vent.Outlet						
2	10	n.a.	n.a.	n.a.	62	per compressor
EH1.Building.Ventilation.Inlet						
2	10	n.a.	n.a.	n.a.	62	per compressor
EH1.Ventilation.Inlet.Fan.ParticleSeparator						
2	10	n.a.	n.a.	n.a.	86	per compressor
SOUND SOURCES - PE Container						
PE Container - Upper Surface						
1	10	n.a.	n.a.	n.a.	100	per module
PE Container - Bottom Surface						
1	10	n.a.	n.a.	n.a.	100	per module
PE Container - Vertical Surface						
1	10	n.a.	n.a.	n.a.	104	per module
SOUND SOURCES - Function Building						
Function Building - Transformer Opening						
1	3	n.a.	n.a.	n.a.	74	per opening
Function Building - Compressor Room Ventilation Inlet						
1	2	n.a.	n.a.	n.a.	78	per opening
Function Building - Compressor Room Ventilation Outlet						
1	1	n.a.	n.a.	n.a.	78	per opening
Function Building - HVAC Ventilation Outlet						
1	1	n.a.	n.a.	n.a.	78	per opening
SOUND SOURCES - Flare						
Flare						
1	1	n.a.	n.a.	n.a.	103	at the outlet
SOUND SOURCES - Building						
Electrolysis Building - wall						
-	-	n.a.	20		LwA": 61	
Electrolysis Building - roof						
-	-	n.a.	20		LwA": 61	
Electrolysis Building - door						
-	-	n.a.	22		LwA": 62	
Electrolysis Building - gate						
-	-	n.a.	17		LwA": 69	
Functional Building - wall						
-	-	n.a.	58	from compr.	LwA": 61	
Functional Building - roof						
-	-	n.a.	ca. 25		n. c.	
Functional Building - door						
-	-	n.a.	22		n. c.	
Functional Building - gate						
-	-	n.a.	17	from compr.	LwA": 81	
Pump House - wall						
-	-	n.a.	33		LwA": 61	Preliminary
Pump House - roof						
-	-	n.a.	33		LwA": 61	Preliminary

Tolerances: ± 5%