APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY	
APPLICATION #:	OSP – 0595

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Cummins

Manufacturer's Technical Representative: Mercedes Wiemers

Mailing Address: 1939 Deere Ave, Irvine, CA 92606

Telephone: 949-253-6064 Email: mercedes.wiemers@cummins.com

Product Information

Product Name: DPF Control Panels

Product Type: Control Panel

Product Model Number: 11-2-0067 and 11-2-0068
(List all unique product identification numbers and/or part numbers)

General Description: Control Panel for Diesel Generator After Treatment System

Mounting Description: Wall Mounted to Flexible or Rigid Wall

Applicant Information

Applicant Company Name: The VMC Group

Contact Person: John Giuliano

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: 973-838-1780 Email: john.giuliano@thevmcgroup.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: Date: 3/12/19

Title: President Company Name: The VMC Group

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OSHPD
OSP-0595
By: Timothy J Piland
DATE: 07/13/2020
CALIFORNIA BUILDING CODE, 2019

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: The VMC Group

Name: Kenneth Tarlow California License Number: CA – S2851

Mailing Address: 180 Promenade Cir. Suite 300, Sacramento, CA 95835

Telephone: 832-627-2214 Email: ken.tarlow@thevmcgroup.com

Supports and Attachments Preapproval

☐ Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)

☒ Supports and attachments are not preapproved

Certification Method

☒ Testing in accordance with: ☒ ICC-ES AC156

☐ Other (Please Specify): _____

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OSHPD
OSP-0595
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CALIFORNIA BUILDING CODE 2019

Testing Laboratory

Company Name: Dynamic Certification Laboratories

Contact Name: Josh Sailer

Mailing Address: 1315 Greg Street Suite 109, Sparks, NV 89431

Telephone: 775-358-5085 Email: josh@shaketest.com

Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = 1.50 (Rigid Wall) and 4.50 (Flexible Wall)

S_{DS} (Design spectral response acceleration at short period, g) = 2.00

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0 (Rigid Wall) and 2.0 (Flexible Wall)

Ω_0 (System overstrength factor) = 2

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1

Equipment or Component Natural Frequencies (Hz) = See Attachment

Overall dimensions and weight (or range thereof) = See Attachment

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: ☐ Yes ☒ No

Design Basis of Equipment or Components (V/W) =

S_{DS} (Design spectral response acceleration at short period, g) =

S_{D1} (Design spectral response acceleration at 1 second period, g) =

R (Response modification coefficient) =

Ω_0 (System overstrength factor) =

C_d (Deflection amplification factor) =

I_p (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component Natural Frequencies (Hz) =

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2015: ☐ Yes ☒ No

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List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☐ Drawings ☐ Calculations ☐ Manufacturer's Catalog

☐ Other(s) (Please Specify):

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025

Signature: Date: July 13, 2020

Print Name: Timothy J Piland Title: SSE

Special Seismic Certification Valid Up to: S_{DS} (g) = 2.00 z/h = 1

Condition of Approval (if applicable):

Table 1 - Certified Product Table

Model Number	Max Breaker Rating [Amps]	Enclosure				Max Weight [lbs]	Installation Method	UUT
		NEMA Rating	Max Height [in]	Max Width [in]	Max Depth [in]			
11-2-0067	6	3R	19.0	19.0	8.5	32	Rigid/Flexible Wall Mount	UUT-1a,b
11-2-0068	4	3R	19.0	19.0	8.5	35	Rigid/Flexible Wall Mount	UUT-2a,b

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OSP-0595
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Table 2 - Certified Subcomponent Table

Cummins Part Number	Description	Weight [lbs]	Manufacturer	UUT
01-1-000662	Circuit Breaker (4A)	0.10	Phoenix Contact	UUT-2a,b
01-1-000682	Circuit Breaker (6A)	0.10	Phoenix Contact	UUT-1a,b
01-1-000509	DC Converter (24VDC/5VDC)	0.50	Phoenix Contact	UUT-1a,b UUT-2a,b
01-1-000168	DC Converter (12VDC/24VDC)	0.50	Phoenix Contact	UUT-1a,b UUT-2a,b
01-1-000277	Relay (6A @250VAC/30VDC)	0.07	Quantum Automation	UUT-1a,b UUT-2a,b
01-1-000008	Programmable Logig Controller (24VA, 1A)	1.30	Quantum Automation	UUT-1a,b UUT-2a,b
01-1-000554	4" Fan (24VDC, 11.8 CFM)	0.70	Rittal	UUT-1a,b UUT-2a,b
01-1-000001	CAN Modbus Slave Converter	0.40	AFDWEB	UUT-1a,b UUT-2a,b

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UNIT UNDER TEST (UUT)
Summary Sheet

UUT-01a

30877-1801; UUT-01a

Model Line	Model Number	Manufacturer
DPF Control Panels	11-2-0067	Cummins

Product Construction Summary

Plain Carbon Steel Enclosure

Options / Subcomponent Summary

4A Circuit Breaker: Phoenix Contact ; DC Converters: Phoenix Contact ; Relays: Quantum Automation ; Programmable Logic Controller: Quantum Automation ; Fans: Rittal ; CAN Modbus Slave Converter: AFDWEB

UUT Properties

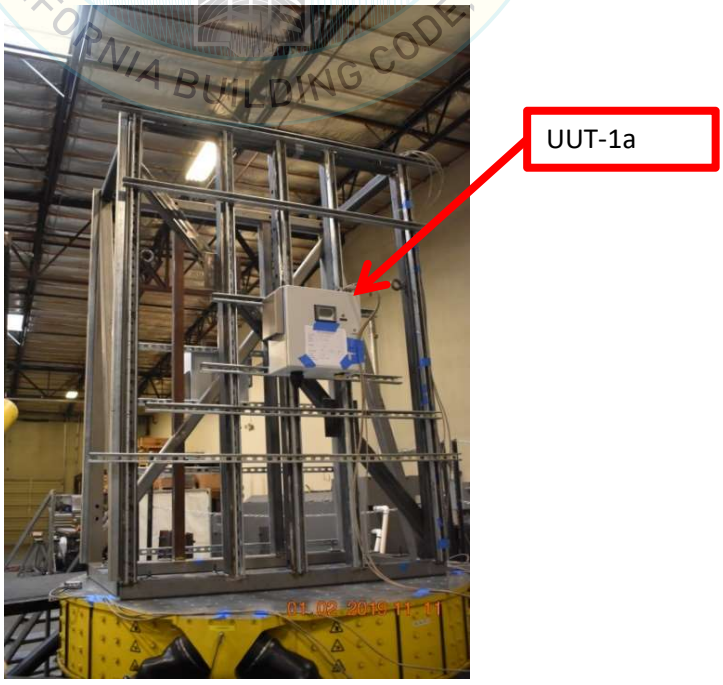
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
32	8.5	19	19	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS}	z/h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

Test Mounting Details

UUT-1a was mounted to 12 gage unistrut on the DCL Wall Interface Fixture using (4) 1/4"-20 diameter grade 5 bolts, washers, plate washers, and spring nuts. DCL Wall Interface Fixture mounted directly to shake table.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

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UNIT UNDER TEST (UUT)
Summary Sheet

UUT-01b

30877-1801; UUT-01b

Model Line	Model Number	Manufacturer
DPF Control Panels	11-2-0067	Cummins

Product Construction Summary

Plain Carbon Steel Enclosure

Options / Subcomponent Summary

4A Circuit Breaker: Phoenix Contact ; DC Converters: Phoenix Contact ; Relays: Quantum Automation ; Programmable Logic Controller: Quantum Automation ; Fans: Rittal ; CAN Modbus Slave Converter: AFDWEB

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
32	8.5	19	19	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS}	z/h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

Test Mounting Details

UUT-1b was mounted to 12 gage unistrut on the DCL Wall Interface Fixture using (4) 1/4"-20 diameter grade 5 bolts, washers, plate washers, and spring nuts. DCL Wall Interface Fixture mounted to (4) VMC MSSH-1E-825N Spring Isolators. Isolators mounted to adapting plate. Adapting plate mounted directly to shake table.

All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

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UNIT UNDER TEST (UUT)
Summary Sheet

UUT-02a

30877-1801; UUT-02a

Model Line	Model Number	Manufacturer
DPF Control Panels	11-2-0068	Cummins

Product Construction Summary

Plain Carbon Steel Enclosure

Options / Subcomponent Summary

6A Circuit Breaker: Phoenix Contact ; DC Converters: Phoenix Contact ; Relays: Quantum Automation ; Programmable Logic Controller: Quantum Automation ; Fans: Rittal ; CAN Modbus Slave Converter: AFDWEB

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
35	8.5	19	19	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS}	z/h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

Test Mounting Details

UUT-2a was mounted to 12 gage unistrut on the DCL Wall Interface Fixture using (4) 1/4"-20 diameter grade 5 bolts, washers, plate washers, and spring nuts. DCL Wall Interface Fixture mounted directly to shake table.

All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

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UNIT UNDER TEST (UUT)
Summary Sheet

UUT-02b

30877-1801; UUT-02b

Model Line	Model Number	Manufacturer
DPF Control Panels	11-2-0068	Cummins

Product Construction Summary

Plain Carbon Steel Enclosure

Options / Subcomponent Summary

6A Circuit Breaker: Phoenix Contact ; DC Converters: Phoenix Contact ; Relays: Quantum Automation ; Programmable Logic Controller: Quantum Automation ; Fans: Rittal ; CAN Modbus Slave Converter: AFDWEB

UUT Properties

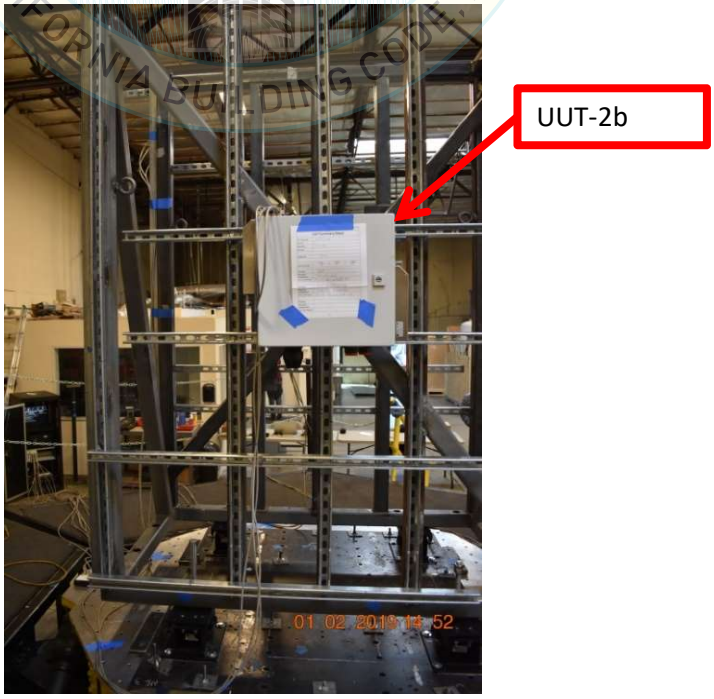
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
35	8.5	19	19	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS}	z/h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

Test Mounting Details

UUT-2b was mounted to 12 gage unistrut on the DCL Wall Interface Fixture using (4) 1/4"-20 diameter grade 5 bolts, washers, plate washers, and spring nuts. DCL Wall Interface Fixture mounted to (4) VMC MSSH-1E-825N Spring Isolators. Isolators mounted to adapting plate. Adapting plate mounted directly to shake table.



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