

APPLICATION FOR OSHPD SPECIAL SEISMIC	OFFICE USE ONLY
CERTIFICATION PREAPPROVAL (USP)	APPLICATION #: OSP – 0444
OSHPD Special Seismic Certification Preapproval (OSP)	
Type: 🗌 New 🖂 Renewal	
Manufacturer Information	
Manufacturer: Cummins Power Generation	
Manufacturer's Technical Representative: Raghukumar Bommenaha	lli
Mailing Address: 1400 73 rd AVE NE, Fridley, Minnesota 55432	
Telephone: 763-574-3302	hukumar@cummins.com
Product Information	MPL
Product Name: QSK95 Diesel Generator Sets	YZ.
Product Type: Diesel Generator Sets OSP-0444	11 I
Product Model Number: <u>C3000 D6, C3000 D6e, C3250 D6, C3250 I</u> (List all unique product identification numbers and/or part numbers)	26e, 3500 D6, C3500 D6e, and PCC3300 HMI
Diesel enginepowered electrical generator sesystem.Seismic enhancements made to the observed during the tests shall be incorporate	ts, w/ controls, w/ and w/o radiator cooling test units required to address anomalies ed into the production units.
Diesel powered electrical generator floor moundation Mounting Description: rigidly floor mounted.	nted on external isolators. PCC 3300 HMI is
Applicant Information	200
Applicant Company Name: VMC Group	
Contact Person: John P. Giuliano, PE	
Mailing Address:113 Main St, Bloomingdale NJ, 07403	
Telephone: 973-838-1780 Email: john.g	iuliano@thevmcgroup.com
I hereby agree to reimburse the Office of Statewide Health accordance with the California Administrative Code, 2016.	Planning and Development review fees in
Signature of Applicant:	Date: 10/23/2020
Title: President Company Name: VMC C	Group
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"	OSHPD
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)	Page 1 of 3

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)										
Company Name: VMC Group										
Name: Mr. Ken Tarlow California License Number: SE2851										
Mailing Address:980 9th Street, 16th Floor, Sacramento, CA 95814										
Telephone: 916-449-9918 Email: <u>ken.tarlow@thevmcgroup.com</u>										
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: Other (Please Specify): 										
CSP-0444										
Testing Laboratory										
Company Name: U.S. Army Engineer Research and Development Center										
Contact Name: Jim Wilcoski										
Mailing Address: 2902 Newmark Drive, Champaign, IL 61826										
Telephone: 217-373-6763										

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

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Seismic	Parameters

Design in accordance with ASCE 7-10 Chapter 13: 🛛 Yes 🗌 No
$[4.50 (S_{DS}=2.00, z/h=1.0), 1.80 (S_{DS}=2.40, z/h=0)]$ Spring Isolated Design Basis of Equipment or Components (F _p /W _p) = $[1.50 (S_{DS}=2.00, z/h=1.0), 1.08 (S_{DS}=2.40, z/h=0)]$ Rigid
S _{DS} (Design spectral response acceleration at short period, g) = 2.00 (z/h=1), 2.40 (z/h=0)
a_p (In-structure equipment or component amplification factor) = <u>2.5</u>
R _p (Equipment or component response modification factor) = <u>2.0 (Spring Isolated)</u> ; 6.0 (Rigid)
Ω_0 (System overstrength factor) = <u>2.0</u>
I _p (Importance factor) = 1.5
z/h (Height factor ratio) = <u>1.0 (S_{DS} = 2.00)</u> , 0.0 (S _{DS} = 2.40)
Equipment or Component Natural Frequencies (Hz) = <u>See Attachments</u>
Overall dimensions and weight (or range thereof) = <u>See Attachments</u>
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: L Ves 🛛 No
List of Attachments Supporting Special Seismic Certification
 Test Report(s) Drawings Calculations Manufacturer's Catalog Other(s) (Please Specify): Attachments
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025
Signature: M. Mina Date: October 26, 2020
Print Name: Mohammad Aliaari Title: Senior Structural Engineer
Special Seismic Certification Valid Up to : Sps (g) = See Above z/h = See Above
Condition of Approval (if applicable):
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15) Page 3 of 3

Model ⁽¹⁾	Skid	Power		Dimensional Data			Engine	Alternator	Padiator	Controllor	z/h = 1	z/h = 0	
Model	Туре	[kW]	Max Length	Max Width	Max Height	Max Weight	Engine	Alternator	Radiator	Controller	S _{DS} (g)	S _{DS} (g)	001
C3000 D6 /	P80		311	119	150	67.682					2 00	2 40	
C3000 D6e ⁽¹⁾	DIG	2500 - 3000	305	119	150	74.060					2.00	2.40	Interpolated
C3250 D6 /	P80	0500 0050	322	125	150	70,218	O	O marine in a	Young	O	2.00	2.40	Interpolated
C3250 D6e	DIG	2500 - 3250	341	125	150	79,807	Cummins	Cummins	Touchstone	Cummins	2.00	2.40	Interpolated
<u>C3500 D6</u> /	P80	2750 2500	322	125	150	70,107					2.00	2.40	Interpolated
C3500 D6e ⁽¹⁾	DIG	2750 - 3500	341	125	150	79,807	CON				2.00	2.40	UUT-02

Table 1 - Certified 60Hz Diesel Generator Set with Radiators

Table 2 - Certified 60Hz Diesel Generator Set without Radiators

1 (1, 2)	Skid Power		Dimensional Data OSP-04				Alternator	Padiator	Controllor	z/h = 1	z/h = 0		
Model	Туре	[kW]	Max Length	Max Width	Max Height	Max Weight	Engine	Alternator	Radiator	Controller	S _{DS} (g)	S _{DS} (g)	001
<u>C3000 D6</u> /	P80	2500 - 3000	239	82	118 ⁹¹ M	ohammad 56,218	Aliaari				2.00	2.40	Similar to UUT-01
C3000 D6e	DIG		250	99	118	63,544	00				2.00	2.40	Interpolated
C3250 D6 /	P80	2500 2250	239	82	118 ⁴ E	56,218	20 Cummine	Cummine	ΝΙ/Δ	Cummins	2.00	2.40	Interpolated
C3250 D6e	DIG	2300 - 3230	250	99 🔪 🏹	118	63,544	Cummins	Cummis	IN/A	Cummis	2.00	2.40	Interpolated
C3500 D6 /	P80		239	82	118	56,218		0			2.00	2.40	Interpolated
C3500 D6e ⁽¹⁾	DIG	2750 - 3500	250	99	118	64,816					2.00	2.40	Similar to UUT-02

Table 3 - Certified PCC3300 HMI Pedestal Mounted

Model		Dimensions			Monufacturer	z/h = 1	z/h = 0	UUT
	Max Length [in]	Max Width [in]	Max Height [in]	Max Weight [lbs]	Manufacturer	S _{DS} (g)	S _{DS} (g)	
PCC3300 HMI (Pedestal Mounted)	20	20	52	64	Cummins	2.00	2.40	UUT-03

Notes

1) The only differences between the "e" and non-"e" models is software.

2) Generator sets listed in Table 2 are identical to those listed in Table 1 except that they lack a radiator.

3) UUT-01 & UUT-02 are floor mounted on spring isolators.

Table 4 - Certified Subcomponents: Engine

Applicable Genset Models	Model Number	Max Weight [lbs]	Manufacturer	Optional Engine Features	UUT
C3000 D6 / C3000 D6e / C3250 D6 / C3250 D6e / C3500 D6e / C3500 D6e	QSK 95	29,321	Cummins	Duplex Fuel Filters Non-Duplex Fuel Filters Cartridge Lube Oil Filter DC Prelube Device Standard Electric Starter Redundant Electric Starter Coalescing Breather	UUT-01, UUT-02

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Table 5 - Certified Subcomponents: Alternator

Applicable Genset Models	Model Number	47	Manufacturer44	Material	Max Weight [lbs]	UUT
C3000 D6 / C3000 D6e /	P80 S				14,065	Extrapolated
C3000 D6 / C3230 D0e		-	By Mohammad Aliaari			
C3250 D6 / C3250 D6e /	P80 Т 🛛 🔿				14 992	Extrapolated
C3500 D6 / C3500 D6e		- Vana			11,002	
C3000 D6 / C3000 D6e /			DATE: 10/26/2020			
C3250 D6 / C3250 D6e /	P80 W	b		9	18,950	Extrapolated
C3500 D6 / C3500 D6e		7		0		
<u>C3000 D6</u> / C3000 D6e /						
C3250 D6 / C3250 D6e /	P80 X			Carbon Steel	19,080	UUT-01
C3500 D6 / C3500 D6e				Laminations		
N/A	P80 Y		Cummins NO	and Copper	19,150	Interpolated
C3500 D6 / C3500 D6e	DIG C			Windingo	20,780	Interpolated
C3000 D6 / C3000 D6e /				vindings		
C3250 D6 / C3250 D6e /	DIG D				21,510	Interpolated
C3500 D6 / C3500 D6e						
C3000 D6 / C3000 D6e /						
C3250 D6 / C3250 D6e /	DIG E				22,330	Interpolated
C3500 D6 / C3500 D6e						
C3000 D6 / C3000 D6e /						
C3250 D6 / C3250 D6e /	DIG F				24,760	Interpolated
C3500 D6 / C3500 D6e						
C3500 D6 / C3500 D6e	DIG G				26,032	UUT-02

Table 6 - Certified Subcomponents: Radiator

Applicable Genset Models	Part Number [ft ²]		Material	Manufacturer	Max Weight [lbs]	UUT
<u>C3000 D6</u> / C3000 D6e / C3250 D6 / C3250 D6e / <u>C3500 D6</u> / C3500 D6e	A049E404	84	Copper Core	Young Touchstone	11,500	UUT-01
	A048D643	94	Carbon Steel Structure	Tourig Touchstone	13,140	UUT-02

Table 7 - Certified Subcomponents: Skid

Applicable Genset Models	Material	Skid Type	Part Number	Manufacturer	Max Weight [lbs]	UUT
<u>C3000 D6</u> / C3000 D6e / C3250 D6 / C3250 D6e / <u>C3500 D6</u> / C3500 D6e	Structural Carbon Stool	P80	A047N790	BTD Manufacturing	5,100	UUT-01
	Structural Carbon Steel	DIG O	A047Y181		9,000	UUT-02

Table 8 - Certified Subcomponents: Controller Mad Aliaari

Applicable Genset Models	Model Number	Manufacturer	Max Weight [lbs]	UUT
<u>C3000 D6</u> / C3000 D6e / C3250 D6 / C3250 D6e / <u>C3500 D6</u> / C3500 D6e	PCC 3300	Cumming	250	UUT-01, UUT-02
	PCC 3300 HMI ONLY, ON PEDESTAL	Cummins	65	UUT 03

Table 9 - Certified Subcomponents: Air Cleaner

Applicable Genset Models	Description	Manufacturer	Max Weight [lbs]	UUT
<u>C3000 D6</u> / C3000 D6e / C3250 D6 / C3250 D6e / <u>C3500 D6</u> / C3500 D6e	Normal Duty	Cummins	1,000	UUT-01
	Heavy Duty	Gunninis	1,400	UUT-02

ALTER D D DB VMC GROUP		UNIT U Si	JNDE umm	ER TE ary S	EST (UL Sheet	JT)		UUT-01		
								VN	A-49625-01	
Model Line		Mod	lel Numb	er		Manufacturer				
3000-3500 kW C Generator Se	QSK95 ets		С	;3000 D6			Cummins Power Generation			
.		Prod	uct Con	struction	n Summary					
Diesel powered electric	al generator set 30	00 kW. Carbo	on Steel	base frar	ne					
		Option	s / Subo	compone	ent Summary	,				
Engine: Cummins ; QSI	K 95, Alternator: C	ummins ; P80	X, Radia	ator: Your	ng Touchston	, e ; A049E40	4, Skid: Cur	nmins /		
A047N790, Controller:	Cummins / PCC 33	300, Air Clean	er: Cum	mins / No	ormal Duty					
		1	OR	COD	E Co					
		EDF			M					
		N	UUT	Properti	ies					
Weight		Dim	nension	s [in]		Y1	Lowes	vest Nat. Freq. [Hz]		
[lbs]	Length		Width		Hei	ght	F-B	S-S	V	
67,682	311.00		119.00	5-04	++ 150	0.00	3.3	3.2	6.7	
	1 - - - - - - - - - -	UUT Highest	t Passed	d Seismi	c Run Inforn	nation				
Building Code	ICC-ES AC156	a _{By} .S _D	sloha	mz/had	Aliaari	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2019		56 2.0	00	1.0	1.5	3.20	2.40	NA	NA 0.05	
		DATE	Z.40 0.0 1.5 NA				NA 1.61 0.65			
I Init is mounted to test	fixture using (18)	MC M2SSHX	1 est Mo	no isolate	Jetalis	are welded t	o the fixture			
							WEST			
All units	s were filled with co	ontents and m	aintaine	d structur	al integrity ar	nd functional	ity after AC-	156 test.		

ATHED AND DE VMC GROUP) UI	NIT UNI Sum	DER TE mary S	ST (UL heet	JT)		UUT-02			
							VM	IA-49625-01		
Model Line	•	М	odel Numb	er		Manufacturer				
3000-3500 kW Q Generator Se	ISK95 ets		Cummins Power Generation							
		Product C	onstructior	n Summary						
Diesel powered electric	al generator set 3500 k\	V. Carbon Ste	el base frar	ne						
		Options / Su	ubcompone	ent Summarv	,					
Engine: Cummins / QSł A047Y181 ; Controller:	< 95 ; Alternator: Cumm Cummins / PCC 3300 ;	ins / DIG G ; F Air Cleaner: C	Radiator: Yc Cummins / H	eung Touchste leavy Duty	one / A048E	0643 ; Skid: (Cummins /			
UUT Properties										
Weight	- S	Dimensi	ons [in]		Y2	Lowe	st Nat. Freq	. [Hz]		
	Length	Wie	Width		Height		S-S	V		
79,807	341.00	125	.00" -04	++ 150 Due lefere		3.3	3.2	6.6		
Building Code	Test Criteria	Highest Pas	z/b			•	Δ	Δ		
Dunning Code	rest officerta	2 00	am#mao	Allari	7FLX-H	~ RIG-H	Π Π Π Δ	RIG-V		
CBC 2019	ICC-E <mark>S AC1</mark> 56	2.40	0.0	1.5	NA	NA	1.61	0.65		
		DATE	Mounting D	etails				0.00		
	in the bang (20) outsyn									
All units	were filled with content	s and maintai	ned structur	al integrity ar	nd functiona	lity after AC-	156 test			

ALTER D ALTER D VMC GROUP		UN	IIT UND Sumr	DER TE nary S	ST (UU heet	JT)		UUT-03		
							VMA-49625-01			
Model Line			Me	odel Numb	er		Γ	Manufacture	er	
HMI only on ped	estal		P	CC 3300 HI	MI		Cummins Power Generation			
			Product Co	onstructior	n Summary					
ASTM A36 mild steel pe	destal base,	, ASTM B221	I 6063 T-52 A	Aluminum p	edestal uprig	ht, ASTM A5	69 mild stee	el HMI wrapj	ber	
		(Options / Su	bcompone	nt Summary	,				
		N	DFOR	COD	COMP					
Weight			Dimensio	ons[in]	D	P_	Lowest Nat. Freq. [Hz]			
[lbs]	Ler	ngth	Wid	lth	Height		F-B	S-S	v	
66	20	.00	20.	0P-04	44 52.	44 52.00 M		4.3	> 33.3	
		UUT F	lighest Pass	ed Seismi	c Run Inform	nation				
Building Code	Test C	Criteria	BY Speloh	ar z/h ad	Aliaari	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2019	ICC-ES	AC156	2.00	1.0	1.5	3.2 <mark>0</mark>	2.40	NA	NA	
010 10 10			2.40	0.0	1.5	NA	NA	1.61	0.65	
		<u>V/L</u>	Test	Nounting D	etails					
All units	were filled v	vith contents	and maintain	the structure	al integrity an	d functionali	ty after AC-	156 test.		