



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

**APPLICATION FOR HCAI SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0830

**HCAI Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: Cummins Power Generation

Manufacturer's Technical Representative: Abhishek Patil

Mailing Address: 1400, Fridley, MN 55432

Telephone: (763) 574-5000

Email: abhishek.patil@cummins.com

**Product Information**

Product Name: GZ17 Diesel Generator Sets

Product Model Number(s): C600D6E, C750D6E, C800D6E, C900D6E, C1000D6ED, C825D5EB, C900D5EB, C1000D5E  
C1100D5E, C750D6EB C800D6EB, C900D6EB, C1000D6EB

Product Category: Emergency and Standby Power Systems

Product Sub-Category: Generators

General Description: Diesel Generator sets with or without fuel tank and/or enclosure

Mounting Description: Rigid Mounting from Unit base or Fuel Tank to Rigid Structure

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

**Applicant Information**

Applicant Company Name: VMC Group

Contact Person: John Giuliano

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780

Email: john.giuliano@thvmcgroup.com

Title: President



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

Company Name: THE VMC GROUP

Name: Kenneth Tarlow California License Number: S2851

Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814

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

**Certification Method**

- GR-63-Core
- ICC-ES AC156
- IEEE 344
- IEEE 693
- NEBS 3
- Other (Please Specify): \_\_\_\_\_

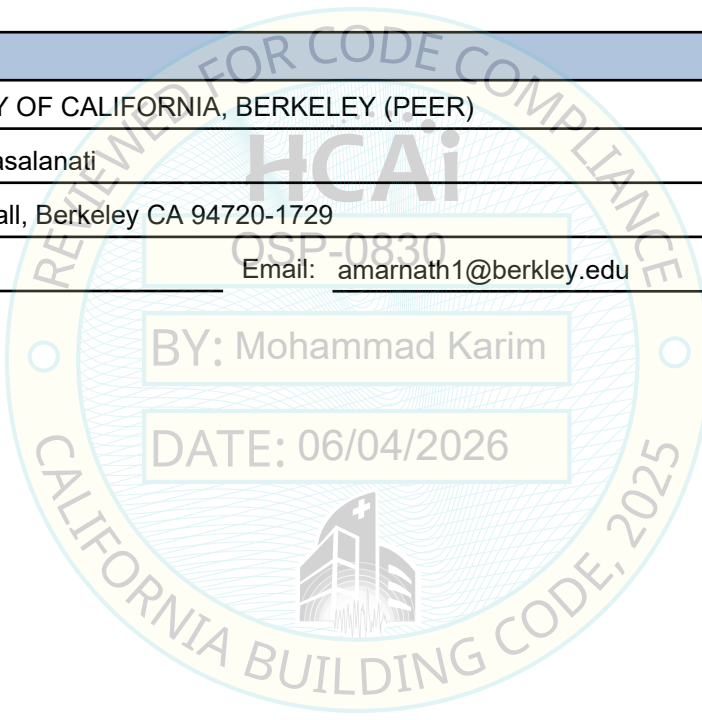
**Testing Laboratory**

Company Name: UNIVERSITY OF CALIFORNIA, BERKELEY (PEER)

Contact Person: Amarnath Kasalanati

Mailing Address: 325 Davis Hall, Berkeley CA 94720-1729

Telephone: (510) 642-3437 Email: amarnath1@berkeley.edu



BY: Mohammad Karim

DATE: 06/04/2026



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**Seismic Parameters**

Certified Response Spectral Acceleration Factors:(Fp/Wp)

Horizontal (A Flx-H), g= 1.94 (A Rig-H), g= 0.78

Vertical (A Flx-V), g= 1.30 (A Rig-V), g= 0.52

SDS (Design spectral response acceleration at short period, g) = 1.94

Hf (Force amplification height factor) = 1

Ru (Structure ductility reduction factor) = 1

Ip (Importance factor) = 1.5

z/h (Height ratio factor) = 0

**HCAI Approval (For Office Use Only) - Approval Expires on 06/04/2032**

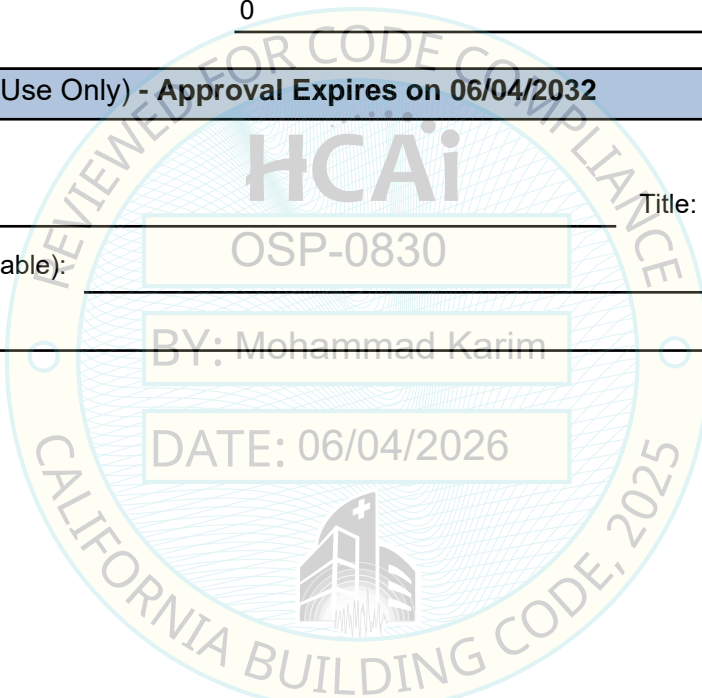
Date: 6/4/2026

Name: Mohammad Karim Title: Supervisor, Health Facilities

Condition of Approval (if applicable): OSP-0830

BY: Mohammad Karim

DATE: 06/04/2026



### Table 1a - Diesel Generator Sets Off Tanks

Model	Max Rating [ kW ]	Configuration	Max Dimensions [ in. ]			Max Operating Weight [ lbs. ]	Mounting	UUT
			Length	Width <sup>(1)</sup>	Height			
C600D6E, C750D6E C800D6E, C900D6E C1000D6ED	600,750, 800, 900,1000	Open	178.0	87.0	86.0	14,388	Rigid	Interpolated
		Enclosed	363.0	87.0	113.0	20,388	Rigid	Interpolated

**Note:** Models listed in Table 1a are depopulated versions of units listed in Table 1b (i.e. without sub base fuel tank)

### Table 1b - Diesel Generator Sets On Tanks

Model	Max Rating [ kW ]	Configuration	Max Dimensions [ in. ]			Max Operating Weight [ lbs. ]	Mounting	UUT
			Length	Width <sup>(1)</sup>	Height			
DQDAx	300	Enclosed On Tank	232.0	90.0	128.0	29,504	Isolated	UUT-03
C600D6E, C750D6E C800D6E, C900D6E C1000D6ED	600 - 1000	Open On Tank <sup>1</sup>	363.0	87.0	113.0	20,388	Rigid	Interpolated
		Enclosed On Tank <sup>2</sup>	363.0	87.0	140.0	25,027	Rigid	Interpolated
C1000D6ED	1000 kW	Enclosed On Tank	376.0	86.5	125.5	37,176	Rigid	UUT-01
C825D5EB, C900D5EB, C1000D5E C1100D5E, C750D6EB C800D6EB, C900D6EB, C1000D6EB	600 - 1000	Open On Integral Tank	179.0	92.0	85.0	14,925	Rigid	Interpolated
		Enclosed On Integral Tank	253.0	92.0	111.0	22,241	Rigid	Interpolated
C1100D5E	1000 kW	Enclosed On Integral Tank	253.0	91.5	109.0	23,046	Rigid	UUT-02

**Notes:**

- 1) Open on tank model does not have approved/tested vent pipe configuration
- 2) Fuel tank vent pipe is fastened to top of enclosure

### Table 2 - Certified Engines

Manufacturer	Applicable Genset Model	Model	Material	Weight [ lbs. ]	UUT
Cummins	DQFAx	QSL9-G7	Cast Iron	1,627	UUT-03
	CxD6E(B), C1000D6ED, CxD5E(B)	GZ17 <sup>1</sup>		4,972	UUT-01, UUT-02

Note: GZ17 engine has been renamed S17

### Table 3 - Certified Alternators

Manufacturer	Applicable Genset Model	Model	Material	Max Weight [ lbs. ]	UUT
Cummins	DQDAx	HC4	Steel Lamination & Copper Windings	2,582	UUT-03
CGT	CxD6E(B), C1000D6ED, CxD5E(B)	S6-C		4,173	Extrapolated
		S6-D		4,297	Extrapolated
		S6-E		4,444	Extrapolated
		S6-F		5,095	UUT-01, UUT-02

### Table 4 - Certified Chassis

Manufacturer	Applicable Genset Model	Applicable Genset Configuration	Material	Dry Weight [ lbs. ]	UUT
BTD	C600D6E, C750D6E C800D6E, C900D6E C1000D6ED	Open/Enclosed	Steel	1,434	UUT-01
Matchwell	C825D5EB, C900D5EB, C1000D5E C1100D5E, C750D6EB C800D6EB, C900D6EB, C1000D6EB	Open/Enclosed With Integral Fuel Tank (1335 L)	Steel	3,626	UUT-02

### Table 5a - Certified Enclosures

Manufacturer	Applicable Genset Model	Model	Material	Weight [ lbs. ]	UUT
Cummins	DQDAx	Thor-1	Carbon Steel	4,398	UUT-03
	C600D6E, C750D6E C800D6E, C900D6E C1000D6ED	Sound Level 2	Steel, UL Foam	4,759	UUT-01
	C825D5EB, C900D5EB, C1000D5E C1100D5E, C750D6EB C800D6EB, C900D6EB, C1000D6EB	High Node	Steel, UL Foam	4,781	UUT-02

**Table 5b - Certified Silencers**

Manufacturer	Applicable Genset Model	Model	Material	Weight [ lbs. ]	UUT
Cummins	C600D6E, C750D6E, C800D6E, C900D6E C1000D6ED	CMI	Steel	2,090	UUT-01
Cummins	C825D5EB, C900D5EB, C1000D5E C1100D5E, C750D6EB C800D6EB, C900D6EB, C1000D6EB	CMI	Steel	1,918	UUT-02

**Table 6 - Certified Fuel Tanks**

Manufacturer	Applicable Genset Model	Model	Material	Wet Weight [ lbs. ]	UUT
Tramont	C600D6E, C750D6E C800D6E, C900D6E C1000D6ED	885 gallon <sup>1,2</sup>	Steel	11,391	Extrapolated
		1470 gallon <sup>1,2</sup>	Steel	14,697	UUT-03
		1770 gallon <sup>1,2</sup>	Steel	18,489	Interpolated
		1770 gallon <sup>1,2</sup>	Steel	18,989	UUT-01

**Notes:**

- 1) Only a 2" vent pipe was tested. No larger diameter vent pipes are approved. Vent pipe must be secured to top of enclosure as tested.
- 2) All tanks are UL 142 certified

**Table 7 - Certified Radiators**

Manufacturer	Applicable Genset Model	Model	Frequency	Material	Weight [ lbs. ]	UUT
Bearward	DQDAx	7ft <sup>2</sup> Cooling Area	60 Hz	Carbon Steel & Aluminum	418	UUT-03
Modine	C600D6E, C750D6E C800D6E, C900D6E C1000D6ED	2.57m <sup>2</sup> Cooling Area	60 Hz	Carbon Steel & Aluminum	1,155	UUT-01
AKG	C825D5EB, C900D5EB, C1000D5E C1100D5E, C750D6EB C800D6EB, C900D6EB, C1000D6EB	2.7m <sup>2</sup> Cooling Area	50 HZ	Carbon Steel & Aluminium	1,012	UUT-02
			60 Hz		1,012	

**Table 8 - Certified Air Filter Assemblies**

Manufacturer	Applicable Genset Model	Model	Material	Weight (total assembly) [ lbs. ]	UUT
Cummins Filtration	C600D6E, C750D6E, C800D6E, C900D6E C1000D6ED	Normal Duty	Carbon Steel	70	UUT-01
Cummins Filtration	C825D5EB, C900D5EB, C1000D5E C1100D5E, C750D6EB C800D6EB, C900D6EB, C1000D6EB	Heavy Duty	Carbon Steel	273	UUT-02

**Table 9 - Certified Controllers**

Manufacturer	Applicable Genset Model	Model	Description	Material	Weight [ lbs. ]	UUT
Cummins	DQDAx	PCC 2100	Control Panel	Carbon Steel & Plastic	10	UUT-03
	CxD6E(B), C1000D6ED, CxD5E(B)	PCC 3300 V2	Control Panel	Carbon Steel & Electrical Components	145	UUT-01, UUT-02

**Table 10 - Certified Heaters**

Manufacturer	Applicable Genset Model	Model	Description	Material	Weight [ lbs. ]	UUT
Hotstart	CxD6E(B), C1000D6ED, CxD5E(B)	Coolant Heater	240V, 2.5kW	Carbon Steel	4.4	UUT-01

**Table 11 - Certified Circuit Breakers**

Manufacturer	kW Range	Model	Description	Material	Weight [ lbs. ]	UUT
Schneider Electric	CxD6E, C1000D6ED	250 - 800A	Electrically Operated CB	Copper	30	Extrapolated
		1200A			32	UUT-01
		1600 - 3000A			110	Interpolated
		250 - 800A	Manually Operated CB		30	Extrapolated
		1200A			32	UUT-01
		1600 - 2500A			53	Interpolated
	CxD6EB, CxD5E(B)	1250 - 1600A	Electrically Operated CB		46	Interpolated
		1250 - 2500A	Disconnect Switch		79	Interpolated
		1250 - 2000A	Manually Operated CB		113	Interpolated
		2500A			113	UUT-02

**Table 12 - Certified Circuit Breaker Boxes**

Manufacturer	kW Range	Model	Material	Weight [ lbs. ]	UUT
Cummins	CxD6E, C1000D6ED	Dual CB Box, 2X CB Configuration, Bottom Entry	Carbon Steel	196	UUT-01
Cummins	CxD6EB, CxD5E(B)	2000A - 2500A, 4 Pole	Carbon Steel	110	UUT-02

**Table 13 - Certified Terminal Boxes**

Manufacturer	kW Range	Model	Material	Weight [ lbs. ]	UUT
Cummins	CxD6E, C1000D6ED	LHS/RHS CB, LHS/RHS Control	Carbon Steel	222	UUT-01
Cummins	CxD6EB, CxD5E(B)	Circuit Breaker Box - LHS/RHS, Control Panel - Rear	Carbon Steel	205	UUT-02



# UNIT UNDER TEST (UUT)

## Summary Sheet

**UUT-1**

Test Report (TR): DCL-24474-2401; TR UUT#: UUT-12; Test Lab: PEER; Reporting: DCL; Test Dates: 8/6/2024 & 9/18/2024

Model Line	Model Number	Manufacturer
GZ17	C1000D6E	Cummins

### Product Construction Summary

Diesel powered electrical generator set. Steel Base Frame

### Options / Subcomponent Summary

Engine: GZ17, Cummins, Cast Iron; Alternator: S6-F, CGT, Steel Lamination & Copper Windings; Chassis; Enclosure: SL2, Cummins, Steel UL Foam; Silencer: CMI, Cummins, Steel; Fuel Tank: 1770 gallon, Tramont, Steel; Radiator: 2.57 squared meters, Modine, Carbon Steel & Aluminum; Air Filter: Normal Duty, Cummins Filtration, Carbon Steel; Controllers: PCC 3300 V2, Cummins, Carbon Steel & Electrical Components; Breakers: 1200A Electrically & Manually Operated, Schneider Electric, Copper; Circuit Breaker Box: Dual CB Box, Cummins, Carbon Steel; Terminal Box: LHS/RHS CB LHS/RHS Control, Cummins, Carbon Steel

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]						
	Length	Width	Height	F-B	S-S	V				
37,176	376.0	86.5	125.5	16.0	7.5	11.5				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S <sub>DS</sub> (g)	z/h	H <sub>f</sub>	R <sub>μ</sub>	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2025	ICC-ES AC156-24	-	-	-	-	-	-	-	-	-
		1.94	0.0	1.0	1.0	1.5	1.94	0.78	1.30	0.52

### Test Mounting Details

UUT-1 was rigidly mounted to the shake table using (20) 3/4" diameter Grade 8 bolts.



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

# UNIT UNDER TEST (UUT)

## Summary Sheet

**UUT-2**

Test Report (TR): DCL-24474-2401; TR UUT#: UUT-13; Test Lab: PEER; Reporting: DCL; Test Dates: 8/6/2024 & 9/18/2024

Model Line	Model Number	Manufacturer
GZ17	C1100D5E	Cummins

### Product Construction Summary

Diesel powered electrical generator set. Steel Base Frame

### Options / Subcomponent Summary

Engine: GZ17, Cummins, Cast Iron; Alternator: S6-F, CGT, Steel Lamination & Copper Windings; Chassis; Enclosure: High Node, Cummins, Steel UL Foam; Silencer: CMI, Cummins, Steel; Radiator: 2.70 squared meters, AKG, Carbon Steel & Aluminum; Air Filter: Heavy Duty, Cummins Filtration, Carbon Steel; Controllers: PCC 3300 V2, Cummins, Carbon Steel & Electrical Components; Circuit Breaker: 2500A Manually Operated, Schneider Electric, Copper; Circuit Breaker Box: 2000-2500A, Cummins, Carbon Steel; Terminal Box: Circuit Breaker Box - LHS/RHS Control Panel - Rear, Cummins, Carbon Steel

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]					
	Length	Width	Height	F-B	S-S	V			
23,046	253.0	91.5	109.0	5.0	4.0	10.0			
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information							
		S <sub>DS</sub> (g)	z/h	H <sub>f</sub>	R <sub>μ</sub>	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)
CBC 2025	ICC-ES	-	-	-	-	-	-	-	-
	AC156-24	1.94	0.0	1.0	1.0	1.5	1.94	0.78	1.30

### Test Mounting Details

UUT-2 was rigidly mounted to the shake table using (16) 3/4" diameter Grade 8 bolts.



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

# UNIT UNDER TEST (UUT)

## Summary Sheet

**UUT-3**

Test Report (TR): PEI-PEER-CUM-130; TR UUT#: UUT-33; Test Lab: PEER; Reporting: PEER; Test Dates: 4/24/2013

Model Line	Model Number	Manufacturer
DQDA	DQDAC	Cummins

### Product Construction Summary

Structural Carbon Steel Skid and Carbon Steel Fuel Tank

### Options / Subcomponent Summary

Engine: QSL9-G7, Cummins, Cast Iron; Alternator: HC4, Cummins, Steel Lamination & Copper Windings; Enclosure: Thor-1, Cummins, Carbon Steel; Fuel Tank: 1470 gallon, Tramont, Steel; Radiator: 7 squared feet, Bearward, Carbon Steel & Aluminum; Controllers: PCC 2100, Cummins, Carbon Steel & Plastic

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]						
	Length	Width	Height	F-B	S-S	V				
29,504	232.0	90.0	128.0	3.1	4.4	7.0				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S <sub>DS</sub> (g)	z/h	H <sub>f</sub>	R <sub>μ</sub>	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2025	ICC-ES AC156-24	2.00	1.0	3.5	1.3	1.5	3.20	2.40	-	-
		2.48	0.0	1.0	1.0	1.5	-	-	1.66	0.67

### Test Mounting Details

Genset secured to a sub-base tank via (4) EBCO 4990-60 duro elastomer isolators. Sub-base tank secured to fixture using (10) 5/8" dia. ASTM 325 bolts.



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