



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
FACILITIES DEVELOPMENT DIVISION**

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

OFFICE USE ONLY

**APPLICATION #: OSP-0496**

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

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: Myers Emergency Power Systems

Manufacturer's Technical Representative: Kevin Wolverton

Mailing Address: 44 South Commercial Way, Bethlehem, PA 18017

Telephone: (610) 868-3500

Email: kevin.wolverton@myerseps.com

**Product Information**

Product Name: UPS and Batteries

Product Type: Lighting Inverter Systems

Product Model Number: Various (See Attachment)

General Description: Emergency Lighting Inverter System

Mounting Description: Rigid Floor Mounted, Flush & Recess Wall Mounted

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: Dynamic Certification Laboratories

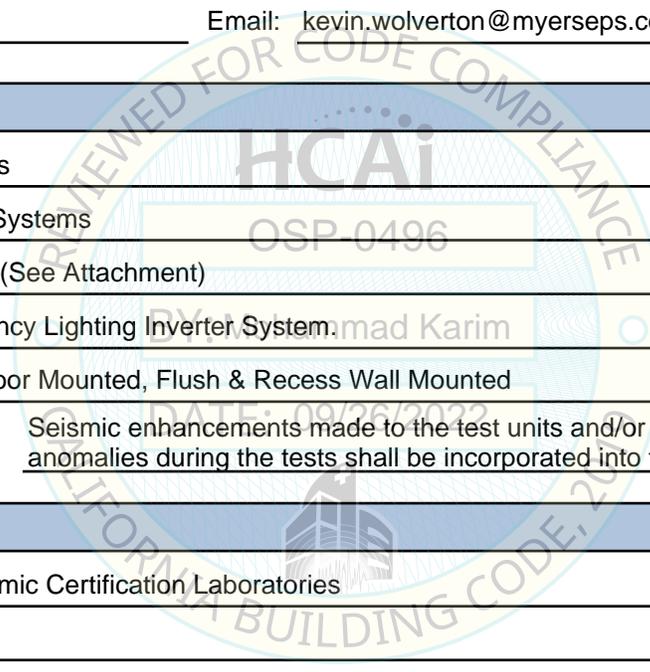
Contact Person: Kelly Laplace

Mailing Address: 1315 Greg Parkway #109, Sparks, NV 89431

Telephone: (775) 358-5085

Email: kelly@shaketest.com

Title: Business Manager





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

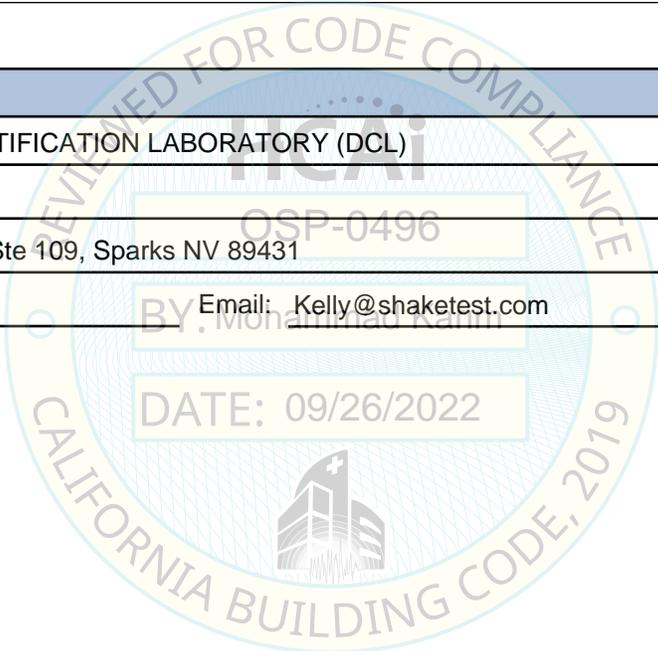
Company Name: THE VMC GROUP  
Name: Kenneth Tarlow California License Number: S2851  
Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814  
Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

**Certification Method**

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

**Testing Laboratory**

Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)  
Contact Person: Kelly Laplace  
Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431  
Telephone: (775) 358-5085 Email: Kelly@shaketest.com





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**Seismic Parameters**

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.44

SDS (Design spectral response acceleration at short period, g) = 2.0

$a_p$  (Amplification factor) = 1.0

$R_p$  (Response modification factor) = 2.5

$\Omega_0$  (System overstrength factor) = 2.0

$I_p$  (Importance factor) = 1.5

$z/h$  (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

**HCAI Approval (For Office Use Only) - Approval Expires on 09/26/2028**

Date: 9/26/2022

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.0  $z/h$  = 1

Condition of Approval (if applicable): DATE: 09/26/2022



**Special Seismic Certification**  
**Table 1 - Certified Components: Recessed Wall Mount**



<b>DCL Project Number:</b>	58623-2201						
<b>Manufacturer:</b>	Myers Emergency Power Systems						
<b>Product Line:</b>	Illuminator Series LV						
<b>Mounting Description:</b>	Recessed wall mount						
<b>Certified Seismic Level:</b>	$S_{DS}=2.0g, z/h=1.0$						
Model	Dimensions (in)			Weight (lb)	Power (VA)	Voltage (V)	UUT
	Depth	Width	Height				
LV-1	6.50	14.25	17.75	55.0	175	120/277V	1

**Special Seismic Certification**  
**Table 2 - Certified Components: Flush Wall Mount**

<b>DCL Project Number:</b>	58623-2201						
<b>Manufacturer:</b>	Myers Emergency Power Systems						
<b>Product Line:</b>	Illuminator Series LV						
<b>Mounting Description:</b>	Flush wall mount						
<b>Certified Seismic Level:</b>	$S_{DS}=2.0g, z/h=1.0$						
Model	Dimensions (in)			Weight (lb)	Power (VA)	Voltage (V)	UUT
	Depth	Width	Height				
LV-1	6.50	14.25	17.75	55.0	175	120/277V	2
LV-2	9.25	19.00	22.00	111.0	350	120/277V	Interpolated
LV-3	9.25	19.00	22.00	136.0	550	120/277V	Interpolated
LV-4	9.25	25.25	22.00	188.0	750	120/277V	3

**Special Seismic Certification**  
**Table 3 - Certified Components: Floor Mount**

<b>DCL Project Number:</b>	58623-2201						
<b>Manufacturer:</b>	Myers Emergency Power Systems						
<b>Product Line:</b>	Illuminator Series LV						
<b>Mounting Description:</b>	Floor mount						
<b>Certified Seismic Level:</b>	$S_{DS}=2.0g, z/h=1.0$						
Model	Dimensions (in)			Weight (lb)	Power (VA)	Voltage (V)	UUT
	Depth	Width	Height				
LV-2	9.25	19.00	22.00	111.0	350	120/277V	Extrapolated
LV-3	9.25	19.00	22.00	136.0	550	120/277V	4
LV-4	9.25	25.25	22.00	188.0	750	120/277V	5

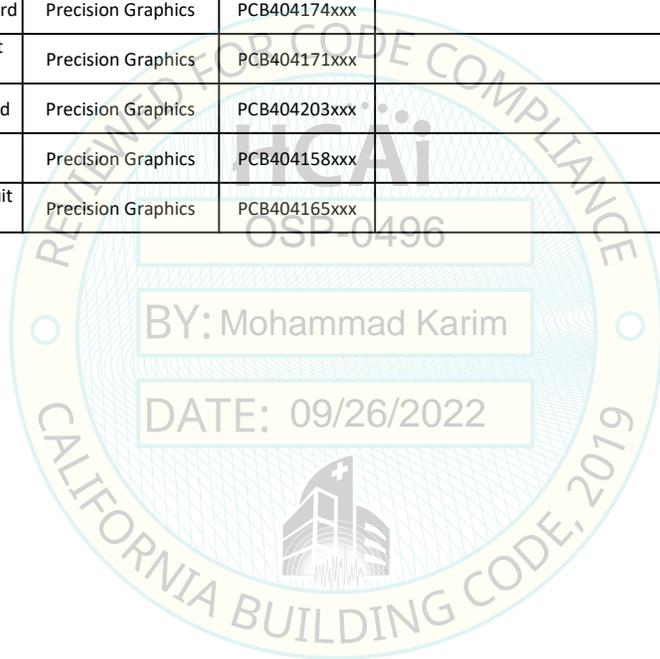
**Special Seismic Certification**  
**Table 4 - Certified Subcomponents: Recessed Wall Mount**



DCL Project Number: 58623-2201

Certified Seismic Level:  $S_{DS}=2.0g$ ,  $z/h=1.0$

Component Type	Manufacturer	Model	Construction Summary	UUT
Enclosure	Myers Emergency Power Systems	CA-203703	Powder-coated cold-rolled carbon steel	1
Main Transformers	Galaxy	XF-FM115055	Copper Windings	1
AC Subassembly Inverter Module	Myers Emergency Power Systems	SA-404227-xx		1
Batteries	Genesis	NP33-12		1
Power Module Circuit Board	Precision Graphics	PCB404125xxx		1
Control Circuit Board	Precision Graphics	PCB404128xxx		1
Indicator/Test Circuit Board	Precision Graphics	PCB404174xxx		1
System Metering Circuit Board	Precision Graphics	PCB404171xxx		1
USB Storage Circuit Board	Precision Graphics	PCB404203xxx*		1
System Display Circuit Board	Precision Graphics	PCB404158xxx		1
Input/Output Relay Circuit Board	Precision Graphics	PCB404165xxx		1



**Special Seismic Certification**  
**Table 5 - Certified Subcomponents: Flush Wall Mount**



DCL Project Number: 58623-2201

Certified Seismic Level:  $S_{Ds}=2.0g$ ,  $z/h=1.0$

Component Type	Manufacturer	Model	Construction Summary	UUT
Enclosure	Myers Emergency Power Systems	CA-203702	Powder-coated cold-rolled carbon steel	2
		CA-203715		3
Main Transformers	Galaxy	XF-FM115055	Copper Windings	2
		XF-FM115054		Interpolated
		XF-FM115063		3
AC Subassembly Inverter Module	Myers Emergency Power Systems	SA-404227-xx		2
		SA-404229-xx		3
Batteries	Genesis	NP33-12		2
	CSB	GP12340		3
Power Module Circuit Board	Precision Graphics	PCB404125xxx		3
	Teamwise			2
Control Circuit Board	Precision Graphics	PCB404128xxx		3
	Teamwise			2
Indicator/Test Circuit Board	Precision Graphics	PCB404174xxx		3
	Teamwise			2
Circuit Breaker Circuit Board	Precision Graphics	PCB404178xxx		3
Circuit Breaker	CBI	C-Frame MKIV		3
	Tyco	W67 Series		3
System Metering Circuit Board	Precision Graphics	PCB404171xxx		3
	Teamwise			2
USB Storage Circuit Board	Precision Graphics	PCB404203xxx		3
	Teamwise			2
BACnet Communication Circuit Board	Precision Graphics	PCB404303xxx		3
System Display Circuit Board	Precision Graphics	PCB404158xxx		3
	Teamwise			2
Input/Output Relay Circuit Board	Teamwise	PCB404270xxx		2

**Special Seismic Certification**  
**Table 6 - Certified Subcomponents: Floor Mount**



DCL Project Number: 58623-2201

Certified Seismic Level:  $S_{Ds}=2.0g$ ,  $z/h=1.0$

Component Type	Manufacturer	Model	Construction Summary	UUT
Enclosure	Myers Emergency Power Systems	CA-203707	Powder-coated cold-rolled carbon steel	4
		CA-203713		5
Main Transformers	Galaxy	XF-FM115053	Copper Windings	4
		XF-FM115063		5
AC Subassembly	Myers Emergency Power Systems	SA-404228-xx		4
Inverter Module		SA-404229-xx		5
Batteries	Genesis	NP33-12		4
	CSB	GP12340		5
Power Module Circuit Board	Teamwise	PCB404125xxx		4, 5
Control Circuit Board	Precision Graphics	PCB404128xxx		4
	Teamwise		5	
Indicator/Test Circuit Board	Precision Graphics	PCB404174xxx		4
	Teamwise		5	
Circuit Breaker Circuit Board	Precision Graphics	PCB404178xxx		4
	Teamwise		5	
Circuit Breaker	CBI	C-Frame MKIV		4, 5
	Tyco	W67 Series		5
System Metering Circuit Board	Precision Graphics	PCB404171xxx		4
	Teamwise		5	
USB Storage Circuit Board	Teamwise	PCB404171xxx		4
Ethernet Communication Circuit Board	Texas Instruments	PCB404348xxx		4
BACnet Communication Circuit Board	Teamwise	PCB404303xxx		5
System Display Circuit Board	Precision Graphics	PCB404158xxx		4
	Teamwise		5	

**Special Seismic Certification**  
**Table 7 - Tested Units: Recessed Wall Mount**



DCL Project Number: 58623-2201  
 Manufacturer: Myers Emergency Power Systems  
 Product Line: Illuminator Series LV  
 Mounting Description: Recessed wall mount  
 Certified Seismic Level:  $S_{DS}=2.0g, z/h=1.0$

Model	Dimensions (in)			Weight (lb)	Power (VA)	Voltage (V)	UUT
	Depth	Width	Height				
LV-1	6.50	14.25	17.75	55.0	175	120/277V	1

**Special Seismic Certification**  
**Table 8 - Tested Units: Flush Wall Mount**

DCL Project Number: 58623-2201  
 Manufacturer: Myers Emergency Power Systems  
 Product Line: Illuminator Series LV  
 Mounting Description: Flush wall mount  
 Certified Seismic Level:  $S_{DS}=2.0g, z/h=1.0$

Model	Dimensions (in)			Weight (lb)	Power (VA)	Voltage (V)	UUT
	Depth	Width	Height				
LV-1	6.50	14.25	17.75	55.0	175	120/277V	2
LV-4	9.25	25.25	22.00	188.0	750	120/277V	3

**Special Seismic Certification**  
**Table 9 - Tested Units: Floor Mount**

DCL Project Number: 58623-2201  
 Manufacturer: Myers Emergency Power Systems  
 Product Line: Illuminator Series LV  
 Mounting Description: Floor mount  
 Certified Seismic Level:  $S_{DS}=2.0g, z/h=1.0$

Model	Dimensions (in)			Weight (lb)	Power (VA)	Voltage (V)	UUT
	Depth	Width	Height				
LV-3	9.25	19.00	22.00	136.0	550	120/277V	4
LV-4	9.25	25.25	22.00	188.0	750	120/277V	5

**UUT1**  
**UNIT UNDER TEST (UUT)**  
**Summary Sheet**



**DCL Project Number:** 58623-2201

**Manufacturer:** Myers Emergency Power Systems

**Product Line:** Illuminator Series LV

**Model Number:** LV-1

**Product Construction Summary:**

Powder-coated cold-rolled carbon steel enclosure. Hardware secured cover.

**Options / Component Summary:**

Galaxy XF-FM115055 Transformer, Myers Power Products SA-404227-xx Subassembly, Genesis NP33-12 Batteries, Precision Graphics PCB404125xxx Power Module Circuit Board, Precision Graphics PCB404128xxx Control Circuit Board, Precision Graphics PCB404174xxx Indicator/Test Circuit Board, Precision Graphics PCB404171xxx System Metering Circuit Board, Precision Graphics PCB404158xxx System Display Circuit Board, Precision Graphics Input/Output Relay Circuit Board

**Note:** The UUT was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

**UUT Properties**

Operating Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
55	6.5	14.25	17.75	N/A	N/A	N/A

**Seismic Test Parameters**

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2	1.0	1.5	3.20	2.40	1.33	0.53

**Unit Mounting Description:**

Rigid recess wall mount. Unit mounted to wall mount fixture using four (4) 1/2"-20 grade 5 hex head bolts, washers, and lock washers.



Overall view of UUT1

**UUT2**  
**UNIT UNDER TEST (UUT)**  
**Summary Sheet**



**DCL Project Number:** 58623-2201

**Manufacturer:** Myers Emergency Power Systems

**Product Line:** Illuminator Series LV

**Model Number:** LV-1

**Product Construction Summary:**

Powder-coated cold-rolled carbon steel enclosure. Hardward secured cover.

**Options / Component Summary:**

Galaxy XF-FM115055 Transformer, Myers Power Products SA-404227-xx Subassembly, Genesis NP33-12 Batteries, Teamwise PCB404125xxx Power Module Circuit Board, Teamwise PCB404128xxx Control Circuit Board, Teamwise PCB404174xxx Indicator/Test Circuit Board, Teamwise PCB404171xxx System Metering Circuit Board, Teamwise PCB404158xxx System Display Circuit Board, Teamwise Input/Output Relay Circuit Board

**Note: The UUT was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.**

**UUT Properties**

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
111	9.25	19	22	N/A	N/A	N/A

**Seismic Test Parameters**

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2022	ICC-ES AC156	2	1.0	1.5	3.20	2.40	1.33	0.53

**Unit Mounting Description:**

Rigid flush wall mount. Unit mounted to wall mount fixture using (4) 1/2"-20 grade 5 hex head bolts, washers, and lock washers.



Overall view of UUT2

**UUT3**  
**UNIT UNDER TEST (UUT)**  
**Summary Sheet**



**DCL Project Number:** 58623-2201

**Manufacturer:** Myers Emergency Power Systems

**Product Line:** Illuminator Series LV

**Model Number:** LV-4

**Product Construction Summary:**

Powder-coated cold-rolled carbon steel enclosure. Hardward secured cover.

**Options / Component Summary:**

Galaxy XF-FM115063 Transformer, Myers Power Products SA-404229-xx Subassembly, CSB GP12340 Batteries, Precision Graphics PCB404125xxx Power Module Circuit Board, Precision Graphics PCB404128xxx Control Circuit Board, Precision Graphics PCB404174xxx Indicator/Test Circuit Board, Precision Graphics PCB404171xxx System Metering Circuit Board, Precision Graphics PCB404348xxx Ethernet Communication Circuit Board, Precision Graphics PCB404158xxx System Display Circuit Board

**Note:** The UUT was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

**UUT Properties**

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
188	9.25	25.25	22	N/A	N/A	N/A

**Seismic Test Parameters**

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2022	ICC-ES AC156	2	1.0	1.5	3.20	2.40	1.33	0.53

**Unit Mounting Description:**

Rigid flush wall mount. Unit mounted to wall mount fixture using (4) 5/16"-18 grade 5 hex head bolts, washers, and lock washers.



Overall view of UUT3

**UUT4**  
**UNIT UNDER TEST (UUT)**  
**Summary Sheet**



**DCL Project Number:** 58623-2201

**Manufacturer:** Myers Emergency Power Systems

**Product Line:** Illuminator Series LV

**Model Number:** LV-3

**Product Construction Summary:**

Powder-coated cold-rolled carbon steel enclosure. Hardward secured cover.

**Options / Component Summary:**

Galaxy XF-FM115053 Transformer, Myers Power Products SA-404228-xx Subassembly, Genesis NP33-12 Batteries, Teamwise PCB404125xxx Power Module Circuit Board, Precision Graphics PCB404128xxx Control Circuit Board, Precision Graphics PCB404174xxx Indicator/Test Circuit Board, Precision Graphics PCB404178xxx Circuit Breaker Circuit Board, CBI C-Frame MKIV Circuit Breaker, Precision Graphics PCB404171xxx System Metering Circuit Board, Teamwise PCB404348xxx Ethernet Communications Circuit Board, Precision Graphics PCB404158xxx System Display Circuit Board

**Note: The UUT was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.**

**UUT Properties**

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
111	9.25	19	22	23.9	24.8	>33.3

**Seismic Test Parameters**

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2022	ICC-ES AC156	2	1.0	1.5	3.20	2.40	1.33	0.53

**Unit Mounting Description:**

Rigid floor mount. Unit mounted to shake table plate using (4) 5/8"-11 grade 5 hex head bolts, washers, and lock washers.



Overall view of UUT4

**UUT5**  
**UNIT UNDER TEST (UUT)**  
**Summary Sheet**



**DCL Project Number:** 58623-2201

**Manufacturer:** Myers Emergency Power Systems

**Product Line:** Illuminator Series LV

**Model Number:** LV-4

**Product Construction Summary:**

Powder-coated cold-rolled carbon steel enclosure. Hardward secured cover.

**Options / Component Summary:**

Galaxy XF-FM115063 Transformer, Myers Power Products SA-404229-xx Subassembly, CSB GP12340 Batteries, Teamwise PCB404125xxx Power Module Circuit Board, Teamwise PCB404128xxx Control Circuit Board, Teamwise PCB404174xxx Indicator/Test Circuit Board, Teamwise PCB404178xxx Circuit Breaker Circuit Board, CBI C-Frame MKIV Circuit Breaker, Tyco W67 Series Circuit Breaker, Teamwise PCB404171xxx System Metering Circuit Board, Teamwise PCB404203xxx USB Storage Circuit Board, Teamwise PCB404158xxx System Display Circuit Board

**Note: The UUT was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.**

**UUT Properties**

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
188	9.25	25.25	22	23.9	24.8	>33.3

**Seismic Test Parameters**

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2022	ICC-ES AC156	2	1.0	1.5	3.20	2.40	1.33	0.53

**Unit Mounting Description:**

Rigid floor mount. Unit mounted to shake table plate using (4) 5/8"-11 grade 5 hex head bolts, washers, and lock washers.



Overall view of UUT5