

APPLICATION FOR OSHPD SPECIAL SEISMIC	OFFICE U	
CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #:	OSP – 0485 – 10
OSHPD Special Seismic Certification Preapproval (OSP)		
Type: New Renewal		
Manufacturer Information		
Manufacturer: Purcell Systems, Inc.		
Manufacturer's Technical Representative: Marcel Vezeau		
Mailing Address: 16125 E. Euclid Avenue, Spokane, WA 99216		
Telephone: 509.720.5510 Email: mveze	au@purcellsystems.com	
Product Information		
Product Name: VaultFlex Outdoor UPS Battery Enclosure		
Product Type: UPS Battery Enclosure		
Product Model Number: <u>See Attachment</u> (List all unique product identification numbers and/or part numbers) General Description: <u>Outdoor UPS Battery Enclosure</u>		
Mounting Description: _ Rigid floor mounted with and without optional o	carbon steel plinth.	
Applicant Information		
Applicant Company Name:		
Contact Person:Matthew J Tobolski, PhD, S.E.		
Mailing Address:960 SW Disk Dr., Suite 104, Bend, OR 97702		
Telephone: 844.878.0200 Email: mtobol	ski@trucompliance.com	
I hereby agree to reimburse the Office of Statewide Health F accordance with the California Administrative Code, 2016. Signature of Applicant:		oment review fees in 10/13/2016
"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)	MMM	OSHPD Page 1 of 3

OSH-FD-759 (REV 12/16/15)

Page 1 of 3



California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)
Company Name: TRU Compliance, LLC
Name: Matthew J Tobolski, PhD, S.E. California License Number: S5648
Mailing Address: _ 960 SW Disk Dr., Suite 104, Bend, OR 97702
Telephone: 844.878.0200 Email: mtobolski@trucompliance.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):
Testing Laboratory
Company Name: Environmental Testing Laboratory (ETL)
Contact Name: Paul E. Little
Mailing Address: 11034 Indian Trail, Dallas, TX 75229

Email: _paul@etIdallas.com

"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)

Telephone: 972.247.9657

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Seismic	Parameters
---------	------------

Design in accordance with ASCE 7-10 Chapter 13: 🖂 Yes 🗌 No
Design Basis of Equipment or Components (F_p/W_p) = 1.44 (S_{DS} = 2.0g); 1.44 (S_{DS} = 3.2g)
S_{DS} (Design spectral response acceleration at short period, g) = 2.0g (z/h = 1.0); 3.2g (z/h = 0.0)
a_p (In-structure equipment or component amplification factor) = <u>1.0</u>
R _p (Equipment or component response modification factor) = 2.5
Ω_0 (System overstrength factor) = 2.0
I_p (Importance factor) = 1.5
z/h (Height factor ratio) =1.0 (S _{DS} = 2.0g); 0.0 (S _{DS} = 3.2g)
Equipment or Component Natural Frequencies (Hz) = <u>See Attachment</u>
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:
List of Attachments Supporting Special Seismic Certification
Test Report(s) Drawings Calculations Manufacturer's Catalog
Other(s) (Please Specify): Attachment
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022
Circatures Ata
Signature: Date: Date: January 26, 2017
Print Name: ALI SUMER Title: DSE
Special Seismic Certification Valid Up to : S _{DS} (g) = <u>See Above</u> z/h = <u>See Above</u>
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 Page 3 of 3

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX



Manufacturar	Duraall Customa Ina								
	Purcell Systems, Inc.	C Dottom / Fr					I TA	\BLE	[1
	/aultFlex Outdoor UP	S Battery Er	iciosure						
<i>Certified Product Cons</i> Cabinet: 0.080" aluminu		odinsulatio	n. Datton	Pack: 0.1	20" carbo	n stool			
			n, battery	/ Kack. U. I	20 Cal DUI	IT SLEEL.			
Certified Options Sumi	mary:								
Center tap, 400/500/600	~	oon steel pl	inth or cor	rosion inh	ibiting pac	d gasket, 24	1/48VDC shu	int/dual a	aux, 24/48
UVR dual aux, 250 VDC s	hunt/dual aux, bell al	arm. Note:	Model nur	mbers show	wn specifi <u>y</u>	y options a	nd follow th	ie Base N	lodel
Number "VFX42-6534-UI	PS-". Refer to model li	ine number	ing for the	significan	ce of "X".				
Mounting Configuration									
Base mounted - rigid									
Note: Installed mounting conf	iguration must be of simila	r configuratio	n and equiva	lent strength	n and stiffnes	ss to those tes	ited.		
Building Code: CBC 201	16	Seismic C	Portificatio	n limite.	20	2.0g z/		/ _P =	15
bunung coue. cbc 201	10		erincain	JIT LIITIILS.	S _{DS} =	3.2g zi	/h=0.0	rp-	1.0
Model Line	Model	Dir	mensions	(in)	Weight		Notes		UUT
Model Ellie	Model	Depth	Width	Height	(lb)		Notes		001
	3840N400AB0A	34	65	75	4567	UUT: Pad			1
	3840XXXXXXXA	34	65	75	4567				Interp.
VaultFlex Outdoor	3841XXXXXXXA	34	65	75	5033				Interp.
UPS Battery Enclosure	3842XXXXXXXA	34	65	75	5503				Interp.
(models preceded by	4800XXXXXXXA	34	65	75	5677				Interp.
"VFX42-6534-UPS-")	4801XXXXXXA	34	65	75	5941				Interp.
_	4802XXXXXXXA	34	65	75	6452				Interp.
	4802C600DF1A	34	65	75	6452	UUT: Plint	th		2

SPECIAL SEISMIC CERTIFICATION MODEL LINE NUMBERING - FOR REFERENCE ONLY



TRU PROJECT NO. 16007

Manufacturer:	Purcell Systems, Inc.		TABLE 1
Model Line:	VaultFlex Outdoor UP		
Options: The options	below follow the Base N	10del Number "VFX42-6534-UPS-".	
Columns 1 - 3	Bus Voltage	480 = 480 VDC	
		384 = 384 VDC	
O a harring A	Detters Medel	0 = 12XE1010F-FR	
Column 4	Battery Model	1 = 12XE1110F-FR	
		2 = 12XE1150F-FR	
Column 5	Center Tap Option	N = No Center Tap	
		C = Center Tap	
	Dreelver Circ	600 = 600 Amp	
Columns 6 - 8	Columns 6 - 8 Breaker Size	500 = 500 Amp	
		400 = 400 Amp	
		A = No option installed	
Column 9	Aux Contacts	B = Dual Aux	
		C = Alarm	
		D = Dual Aux + Alarm	
		A = No option installed	
		B = 24 VDC Shunt	
Column 10	Breaker Option	C = 48 VDC Shunt	
		D = 24 UVR	
		E = 48 UVR	
		F = 250 VDC Shunt	
Column 11	Plinth Option	0 = No Plinth	
0 1 10		1 = Galvanized steel plinth	
Column 12	Thermal Option	A = 48 VDC ACU & Heater	

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

TRU PROJECT NO. 16007



Manufacturer: Model Line:	Purcell Systems, Inc. VaultFlex Outdoor UPS	S Battery Er	nclosure		Table De.	scription: Batteries		TABLE	2
Building Code: CBC				Certificatio	on Limits:	$S_{DS} = 2.0g$ $z/h = 1.0$ $S_{DS} = 3.2g$ $z/h = 0.0$	$I_{P} = 1.5$		
Model Line (Manufacturer)	Model	Di Depth	mension (Width	(in) Height	Weight (Ib)	Material	No	tes	UUT
DataCafa	12XE1010F-FR	22.1	4.9	11.1	107.3	Lead-acid	UUT: quantity (32) ii	nstalled	1
DataSafe (EnerSys)	12XE1110F-FR	22.1	4.9	11.1	114.0	Lead-acid			Interp.
	12XE1150F-FR	22.1	4.9	12.4	129.2	Lead-acid	UUT: quantity (40) ii	nstalled	2

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

TRU PROJECT NO. 16007



Manufacturer: Model Line:	Purcell Systems, Inc. VaultFlex Outdoor Uf		Table Description: Electrical Com	ponents	TABL	E 3
Building Code: CBC 2		Seismic Certification Limits.	$S_{DS} = 2.0g z/h = 1.0$ $S_{DS} = 3.2g z/h = 0.0$	1 _P = 1.5	•	
Component Type	Manufacturer	Model	Description	No	otes	UUT
Heating Assembly	Purcell	2000003845	550W, 60VDC			1,2
Active Cooling Unit	Purcell	2000003565	3.8A, R 134A compressor			1,2
		LGEDC3400	400A, 600 VDC	UUT: 24V shunt trip	, 24V UVR	1
Circuit Breaker	Eaton	LGEDC3500	500A, 600 VDC			Interp.
		LGEDC3600	600A, 600 VDC	UUT: 250V shunt tri	p, 48V UVR	2
Power Supply	Mean Well	HEP-600-54	54V			1,2

UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 16007



Manufacturer:	Purcell Syste	ems, Inc.								1
Model Line:	VaultFlex Ou	utdoor UPS Battery Er	nclosure						JUT	
Model Number:	VFX42-6534-	-UPS-3840N400AB0A			Serial N	umber:	N/A			
Product Construct	tion Summary:									
Cabinet: 0.080" alu	minum with 1.5'	" foil backed insulatio	on; Batte	ery Rack: (0.120" cai	rbon stee	el.			
Options/Subcomp	5									
(32) 12XE1010F-FR I	patteries; 550W,	60VDC Heating assem	nbly; 3.8A	A, R 134A A	Active Co	oling Ass	embly; 400	0A, 600 VI	DC breake	er; 450A,
			اممد اممدا	l. at						
600 VDC breaker; 54	4 V Power supply	i; corrosion inhibiting	i pad gasi	кеі						
600 VDC breaker; 54	V Power supply	r; corrosion inhibiting	j pad gasi	кеі						
500 VDC breaker; 54	1 V Power supply	r; corrosion inhibiting	j pad gasi	Kel						
600 VDC breaker; 54	V Power supply	r; corrosion inhibiting	j pad gasi	Kel						
600 VDC breaker; 54	¥ V Power supply	r; corrosion inhibiting	j pad gasi	Ket						
600 VDC breaker; 54	V Power supply		UUT Pro							
Weight	V Power supply					Lowes	t Natural	Frequen	cy (Hz)	
	V Power supply			operties	Front	Lowes -Back	1	Frequen		tical
Weight		Dimension (in)	UUT Pro	o <i>perties</i> ght			Side		Ver	tical 4.7
Weight(lb)	Depth	Dimension (in) Width	UUT Pro Heiq 7!	pperties ght 5	(-Back 9	Side	-Side	Ver	
Weight(lb)	Depth 34	Dimension (in) Width 65	UUT Pro Heig 7! assed Se	pperties ght 5	(-Back 9	Side 1	-Side 0	Ver 24	1.7
Weight (Ib) 4567	Depth 34 Code	Dimension (in) Width 65 UUT Highest Pa	UUT Pro Heig 7! assed Sec	operties ght 5 eismic Rui	n Informa	-Back 9 a <i>tion</i>	Side	-Side	Ver	

Test Mounting Details:



The UUT was rigid floor mounted to the table using eight (8) 5/8" Grade 8 Bolts. Unit maintained structural integrity and remained functional per manufacturer requirement. Contents were included in testing per operating conditions.

> TRU Compliance, LLC - A Tobolski Watkins Affiliate 844.TRU.0200 | info@trucompliance.com

OSP-0485-10

UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 16007



Manufacturer:	Purcell Syste	ems, Inc.						1		\mathbf{c}
Model Line:	VaultFlex Ou	utdoor UPS Battery	Enclosu	ure					JUT:	2
Model Number:	VFX42-6534-	UPS-4802C600DF1	A		Serial N	umber:	N/A			
Product Constru	ction Summary:									
Cabinet: 0.080" a	luminum with 1.5'	foil backed insulat	tion; Ba	ttery Rack:	0.120" ca	rbon stee	el.			
,	nponent Summary									
		60VDC Heating asse	embly; 3	3.8A, R 134A	Active Co	oling Asse	embly; 600	00 VI	DC Shunt	trip
breaker; 54 V Pow	er supply; carbon	steel plinth								
			UUT	Properties						
Weight		Dimension (in)	UUT	Properties		Lowes	t Natural	Frequen	cy (Hz)	
Weight (Ib)	Depth	Dimension (in) Width		<i>Properties</i> Height	Front	Lowes -Back	1	Frequen -Side	cy (Hz) Vert	tical
Ŭ –	Depth 34			,			1	Side	Vert	tical 2.4
(lb)	•	Width	ŀ	Height 75	6	-Back .7	Side	Side	Vert	
(lb) 6452	•	Width 65	⊢ Passed	Height 75	6	-Back .7	Side 8	-Side .3	Vert 22	
(Ib) 6452 Buildin	34 ng Code	Width 65 <i>UUT Highest</i> Test Criter	Passed ria	Height 75 <i>Seismic Rui</i>	6 n Informa	-Back .7 ation I _P	Side 8 A _{FLX-H}	-Side .3 A _{RIG-H}	Vert 22 A _{FLX-V}	2.4 A _{RIG-V}
(Ib) 6452 Buildir	34	Width 65 UUT Highest	Passed ria	Height 75 <i>Seismic Rui</i> S _{DS}	6 <i>n Informa</i> z/h	-Back .7 a <i>tion</i>	Side 8	-Side .3	Vert 22	2.4



The UUT was rigid mouned to the plinth using eight (8) 5/8" Grade 8 Bolts. The plinth was rigid floor mounted to the table using eight (8) 5/8" Grade 8 Bolts.

Unit maintained structural integrity and remained functional per manufacturer requirement. Contents were included in testing per operating conditions.