

	OFFICE	USE ONLY
APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #:	OSP - 0157-10
OSHPD Special Seismic Certification Preapproval (OSP)		
Type: 🗌 New 🛛 Renewal		
Manufacturer Information		
Manufacturer: G&W Electric		
Manufacturer's Technical Representative: Janet Ache		
Mailing Address: _ 3500 West 127 th Street, Blue Island, IL 60406		
Telephone: 708-297-3736 Email: jache@	gwelec.com	
Product Information		
Product Name: SF6 Insulated Padmount & Vault Switchgear		
Product Type: Transmission & Distribution Power Products		
Product Model Number: See Attachment A (List all unique product identification numbers and/or part numbers) General Description: Enclosed and non-enclosed switches		
Mounting Description: Base mounted - rigid		
Applicant Information		
Applicant Company Name: TRU Compliance, LLC		
Contact Person: Matt Tobolski, S.E.		
Mailing Address: 960 SW Disk Dr., Suite 104, Bend, OR 97702		
Telephone: 844.878.0200 Email: mtobol	ski@trucompliance.com	1
I hereby agree to reimburse the Office of Statewide Health F accordance with the California Administrative Code, 2016. Signature of Applicant:	Planning and Develo	
		. 10/21/2010
Title: President Company Name: TRU C	ompliance, LLC	
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"	MAMA	OSHPD
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)	A coll for the fit and	Page 1 of 3



California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)
Company Name: TRU Compliance, LLC
Name: Matt Tobolski, 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: Clark Dynamic Test Lab
Contact Name: Robert Francis
Mailing Address: _ 1801 Route 51 South, Building 8, Jefferson Hills, PA 15025

Telephone: (412) 387-1001 Email: rfrancis@clarktesting.com

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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 (Fp/Wp) = 1.87
S_{DS} (Design spectral response acceleration at short period, g) = <u>2.50</u>
a_p (In-structure equipment or component amplification factor) = <u>2.5</u>
R_p (Equipment or component response modification factor) = <u>6.0</u>
Ω_0 (System overstrength factor) = 2.0
I_p (Importance factor) = 1.5
z/h (Height factor ratio) =1.0
Equipment or Component Natural Frequencies (Hz) = See Attachment A
Overall dimensions and weight (or range thereof) = See Attachment A
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
List of Attachments Supporting Special Seismic Certification
 Test Report(s) Drawings Calculations Manufacturer's Catalog Other(s) (Please Specify): Attachment A
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022
Signature: Date: 11/30/2016
Signature: Date: 11/30/2016 Print Name: M. R. Karim Title: SHFR
Special Seismic Certification Valid Up to : SDS (g) = 2.5 z/h = 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

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

G&W Electric

16046-CR-001, rev. 0



TABLE 1

Manufacturer: Model Line:

SF6 Insulated Padmount & Vault Switchgear

Certified Product Construction Summary:

Galvanized steel or stainless steel welded tank. Galvanized steel or stainless steel support assembly. Galvanized steel or stainless steel enclosure. 38 kV rating.

Certified Options Summary:

See Table 2

Mounting Configuration:

Base mounted - rigid

Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: CBC 2016		Seismic C	ertificatio	on Limits:		2.5g z/h=1.0 2.5g z/h=0.0	l _P = 1.5
Model Line	Model	Di		mensions (in)		Notes	UUT
Model Line	Model	Depth	Width	Height	(lb)	Notes	001
D 414	2-Way	30	18	67	300		
RAM	3-Way	30	33	67	725		
9" Spacing of LP Mechanisms	4-Way	30	42	67	875		
w/o Enclosure	5-Way	30	51	67	1,025		
	6-Way	30	60	67	1,175	UUT: SS spt and tank	4
	2-Way	30	32	64	825	UUT: SS spt and tank	3
SRAM	3-Way	30	44	64	1,000		
12.5" Spacing of LP Mechanisms	4-Way	30	56	64	1,200		
w/o Enclosure	5-Way	30	68	64	1,400		
w/o Linclosure	6-Way	30	80	64	1,700		
	2-Way	27	43	68	1,100		
VPNI	3-Way	27	58	68	1,400		
12.5" Spacing of	4-Way	27	73	68	1,650		
NI&LP Mechanisms w/o Enclosure	5-Way	27	88	68	1,800		
w/o Enclosure	6-Way	27	103	68	2,300		

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

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16046-CR-001, rev. 0



Manufacturer: Model Line:

SF6 Insulated Padmount & Vault Switchgear

Certified Product Construction Summary:

Galvanized steel or stainless steel welded tank. Galvanized steel or stainless steel support assembly. Galvanized steel or stainless steel enclosure. 38 kV rating.

Certified Options Summary:

See Table 2

Mounting Configuration:

Base mounted - rigid

Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

	Seismic C	Certificatio	on Limits:			,= 1.5	
Madal	Dimensions (in)		(in)	Weight			
Model	Depth	Width	Height	(lb)	Notes	UUT	
2-Way	54	36	90	1,550			
3-Way	54	45	90	1,682			
4-Way	54	54	90	1,800			
5-Way	54	63	90	2,400			
6-Way	54	72	90	2,600			
2-Way	67	40	90	1,300			
3-Way	67	53	90	1,700			
4-Way	67	66	90	2,100			
5-Way	67	79	90	2,500			
6-Way	67	92	90	2,900			
2-Way	68	54	90	2,200	UUT: SS enc, spt and tank	1	
3-Way	68	68	90	2,637			
4-Way	68	82	90	3,075			
5-Way	68	96	90	3,512			
6-Way	68	112	90	3,950	UUT: GS enc, spt and tank	2	
	3-Way 4-Way 5-Way 2-Way 3-Way 4-Way 5-Way 6-Way 2-Way 3-Way 4-Way 5-Way	Model Dia 2-Way 54 3-Way 54 3-Way 54 4-Way 54 5-Way 54 6-Way 54 2-Way 67 3-Way 67 3-Way 67 3-Way 67 5-Way 67 5-Way 67 5-Way 67 5-Way 67 5-Way 67 6-Way 68 3-Way 68 3-Way 68 3-Way 68 3-Way 68 3-Way 68 3-Way 68 5-Way 68	Model Dimensions Depth Width 2-Way 54 36 3-Way 54 45 4-Way 54 54 5-Way 54 63 6-Way 54 63 6-Way 54 72 2-Way 67 40 3-Way 67 53 4-Way 67 66 5-Way 67 79 6-Way 67 92 2-Way 68 54 3-Way 68 68 4-Way 68 82 3-Way 68 96	ModelDepthWidthHeight2-Way5436903-Way5445904-Way5454905-Way5463906-Way5472902-Way6740903-Way6753904-Way6766905-Way6790902-Way6790905-Way6790905-Way6792902-Way6854903-Way6868904-Way6882905-Way688290	Seismic Certification Limits: S _{DS} = Model Dimensions (in) Weight (lb) 2-Way 54 36 90 1,550 3-Way 54 45 90 1,682 4-Way 54 54 90 1,682 4-Way 54 63 90 2,400 5-Way 54 63 90 2,600 2-Way 67 40 90 1,300 3-Way 67 53 90 1,700 4-Way 67 66 90 2,100 5-Way 67 79 90 2,500 6-Way 67 79 90 2,500 6-Way 67 92 90 2,900 2-Way 68 54 90 2,200 3-Way 68 68 90 2,637 4-Way 68 82 90 3,075 5-Way 68	Birrensions (in) Weight Notes Depth Width Height (lb) Notes 2-Way 54 36 90 1,550 3-Way 54 455 90 1,682 4-Way 54 54 90 1,800 5-Way 54 63 90 2,400 6-Way 54 72 90 2,600 2-Way 67 40 90 1,300 3-Way 67 53 90 1,700 2-Way 67 66 90 2,100 4-Way 67 79 90 2,500 5-Way 67 79 90 2,500 6-Way 67 92 90 2,900 2-Way 68 54 90 2,200 2-Way 68 68 90 2,637 4-Way 68 82 90 3,075 5-	

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

16046-CR-001, rev. 0



Manufacturer:	G&W Electric			TABLE 2		
Model Line:	SF6 Insulated Padmount	t & Vault Switchgear				
Building Code: CBC 2016		Seismic Certific	Tation Limits: $S_{DS} = 2.5 g z/h = 1.0$ $S_{DS} = 2.5 g z/h = 0.0$	1 _P = 1.5		
Component Type	Manufacturer	Model	Model Description N			
CONTROLS	G&W Electric	Type 2.0	NEMA 4 fiberglass enclosure, knobs		2	
CONTROLS	Gaw Electric	Type 3.1		1		
LP SWITCH	CCS	611GZE8101	1/4" SS pressure port and diaphragm		1-4	
INTERNAL AUXILIARY	OMRON	V-15G2-1C25-K	LP auxiliary contact		1-4	
CONTACT	Honeywell	BA-2RV2-A2	NI auxiliary contact		1-2	

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

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UUT 1

Manufacturer: Model Line:

G&W Electric

SF6 Insulated Padmount & Vault Switchgear Model Number: PNI - 2-Way

Serial Number: 2011-0219-0002

Product Construction Summary:

Stainless steel welded tank. Stainless steel support assembly. Stainless steel enclosure. 38 kV rating.

Options/Subcomponent Summary:

Controls: G&W Electric Type 3.1; LP Switch: CCS 611GZE8101; Internal Auxiliary Contacts: Omron V-15G2-1C25-K, Honeywell BA-2RV2-A2.

			UUT Pro	operties						
Weight	Lowest Natural Frequency (Hz)									
(lb)	Depth	Width Height Fron			Front	t-Back Side-Side			Vertical	
2035	68	54	9	90 19.3		9.3	8.3		>33	
		UUT Highest P	Passed Se	eismic Rul	n Informa	ation				
Buildi	ng Code	Test Criteri	Test Criteria S		z/h l _P		A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC	2016	ICC-ES AC156		2.5	1.0 1.5		4.00	3.00	1.67	0.67

Test Mounting Details:



Unit mounted to table using (8) 5/8"-11 Hex Head Bolts. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

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COMPLIANCE

UUT 2

Manufacturer:	
Model Line:	

Model Number:

G&W Electric

SF6 Insulated Padmount & Vault Switchgear PNI - 6-Way

Serial Number: 2011-0219-0001

Product Construction Summary:

Galvanized steel welded tank. Galvanized steel support assembly. Galvanized steel enclosure. 38 kV rating.

Options/Subcomponent Summary:

Controls: G&W Electric Type 2.0; LP Switch: CCS 611GZE8101; Internal Auxiliary Contacts: Omron V-15G2-1C25-K, Honeywell BA-2RV2-A2.

UUT Properties											
Weight	Lowest Natural Frequency (Hz)										
(lb)	Depth	Width Height			Front-Back Side			-Side Ve		ertical	
3825	68	112 90		00	16.3		19.5		13.5		
		UUT Highest I	Passed Se	eismic Rul	n Informa	ation					
Building Code Test Criteria S _{DS} (g					z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC	2016	ICC-ES AC15	56	2.5	1.0	1.5	4.00	3.00	1.67	0.67	

Test Mounting Details:



Unit mounted to table using (8) 5/8"-11 Hex Head Bolts.

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

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UUT 3

Manufacturer: Model Line:

SF6 Insulated Padmount & Vault Switchgear

G&W Electric

Model Number: SRAM - 2-Way

Serial Number: 2011-0429-0001

Product Construction Summary:

Stainless steel welded tank. Stainless steel support assembly. 38 kV rating.

Options/Subcomponent Summary:

LP Switch: CCS 611GZE8101; Internal Auxiliary Contacts: Omron V-15G2-1C25-K, Honeywell BA-2RV2-A2.

			UUT Pro	operties							
Weight	Dimension (in)				Lowest Natural Frequency (Hz)						
(lb)	Depth	Width	Height		Front-Back		Side-Side		Vertical		
750	30	32	6	4	18.7		19.8		>33		
		UUT Highest P	Passed Se	eismic Rul	n Informa	ation					
Building Code		Test Criteria		S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2016		ICC-ES AC156		2.5	1.0	1.5	4.00	3.00	1.67	0.67	

Test Mounting Details:



Unit mounted to table using (4) 5/8"-11 Hex Head Bolts. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

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UUT 4

Manufacturer: Model Line:

Model Number:

SF6 Insulated Padmount & Vault Switchgear

G&W Electric

RAM - 6-Way

Serial Number: 2011-0419-0003

Product Construction Summary:

Stainless steel welded tank. Stainless steel support assembly. 38 kV rating.

Options/Subcomponent Summary:

LP Switch: CCS 611GZE8101; Internal Auxiliary Contacts: Omron V-15G2-1C25-K, Honeywell BA-2RV2-A2.

			UUT Pro	operties							
Weight	Dimension (in)				Lowest Natural Frequency (Hz)						
(lb)	Depth	Width	Height		Front-Back		Side-Side		Vertical		
1175	30	60	6	67	14.2		19.5		>33		
		UUT Highest F	Passed Se	eismic Rul	n Informa	ation					
Building Code		Test Criteria		S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2016		ICC-ES AC156		2.5	1.0	1.5	4.00	3.00	1.67	0.67	

Test Mounting Details:



Unit mounted to table using (4) 5/8"-11 Hex Head Bolts. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.