



APPLICATION FOR PREAPPROVAL SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.
OSP – 0146-10

Check whether application is: NEW RENEWAL

1.0 Square D by Schneider Electric North America Philip Caldwell
Manufacturer *Manufacturer's Technical Representative*

1990 Sandifer Blvd, Seneca, SC 29678
Mailing Address

864-886-1471 philip.caldwell@us.schneider-electric.com
Telephone *E-mail Address*

2.0 Power-Zone Model III Medium Voltage Package Unit Substation
Product Name *Product Type*

Serial number varies
Product model No (List all unique product identification numbers and/or serial numbers)

General Description: Rigid floor mounted Model III package unit substation consists of a transformer (Vacuum Pressure Impregnated (VPI) dry-type, open coil wound Cooper or Aluminum) and breaker panels. The package unit is mounted together with an HVL or HVL/cc switchgear unit. The transformers, breaker panels, and switchgear are covered by existing OSPs.

3.0 Square D by Schneider Electric North America Philip Caldwell
Applicant Company Name *Contact Person*

1990 Sandifer Blvd, Seneca, SC 29678 *Philip J. Caldwell*
Mailing Address

864-886-1471 philip.caldwell@us.schneider-electric.com
Telephone *E-mail Address*

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

Philip J. Caldwell 1/19/2011
Signature of Applicant *Date*

Edison Expert Schneider Electric
Title *Company Name*

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Registered Design Professional Preparing the Report

4.0 University of Alabama - Birmingham
Company Name

Lee Gholamreza Moradi
Contact Name

C41383
California License Number

4824 Sulphur Springs Rd, Hoover, AL 35226
Mailing Address

205-975-2718
Telephone

moradi@uab.edu
E-mail Address

California Licensed Structural Engineer Review and Acceptance of the Report

5.0 Forell-Elsesser Engineers, Inc.
Company Name

Marco Scanu, SE
Contact Name

S4454
California License Number

160 Pine St., 6th Flr., San Francisco, CA 94111
Mailing Address

415-837-0700
Telephone

m.scanu@forell.com
E-mail Address

Anchorage Pre-Approval

- 6.0 Anchorage is pre-approved under OPA-
(Separate application for anchorage pre-approval is required)
- Anchorage is not Pre-approved

Certification Method

- 7.0 Testing in accordance with: ICC-ES AC-156 Other (Please Specify):
- Analysis
- Experience data
- Combination of Testing, Analysis, and/or Experience Data (Please Specify):

Testing Laboratory (if applicable)

8.0 Wyle Laboratories Rod Thornberry
Company Name Contact Name

7800 Hwy 20, Huntsville, AL 35806
Mailing Address

(256) 837-4411 E-mail:
Telephone

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Approval Parameters

9.0 Design in accordance with ASCE 7-05 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = 1.66g

S_{DS} (Spectral response acceleration at short period) = 2.21g

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component fundamental period(s) = See Attached "Resonant Frequency Summary"

Building period limits (if any) = n/a

Overall dimensions and weight (or range thereof) = See Attached "Product Range Summary"

Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15: Yes No

Design Basis of Equipment or Components (V/W) =

S_{DS} (Spectral response acceleration at short period) =

S_1 (Spectral response acceleration at 1 second period) =

R (Response modification coefficient) = 1.0

Ω_0 (System overstrength factor) = 1.0

C_d (Deflection amplification factor) = 1.0

I_p (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component fundamental period(s) = Sec

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2007: Yes No

10.0 List of attachments supporting the special seismic certification of equipment or components:

- Test Report
- Drawings
- Manufacturer's Catalog
- Calculations
- Other (Please Specify): SE Acceptance Letter, Product Range Summary, CAN2-1708A.5 & AC156 Requirements Checklist

11.0 OSHPD Approval (For Office Use Only)

Chris Tokas

1/19/2011

December 31, 2016

Signature & Date

Approval Expiration Date

Chris Tokas, SHFR

S_{DS} (g) = 2.21 z/h = 1.0

Name & Title

Special Seismic Certification Valid Up to

Condition of Approval (if any):

OSP APPLICATION
 Square D - Model III Substation
 Product Range Summary

**Square D - Power-Zone Model III
 Medium Voltage Package Unit Substation
 75 - 1,000 kVA Product Range Summary**

Electrical Capacity	Width (in)	Depth (in)	Height (in)	Max. Service Weight (lbs)	Notes
75 kVA	48 - 70	48 - 52	86	2,500	1, 2, 3, 4, 5, 6
Seismic performance characteristics for electrical capacity between 75 kVA and 1000 kVA are interpolated					
1,000 kVA	60 - 82	48 - 52	86	6,900	1, 2, 3, 4, 5, 6
Notes					
1. NEMA Type 1 enclosure 2. Mild steel sheet metal construction 3. Rigid floor anchored 4. Width includes optional 22"-wide air-filled terminal chamber for top or bottom incoming conductors, where required. 5. Height includes top located ventilation ("top hat") 6. Primary disconnect, HVL or HVL/cc, main device dimensions, weight and seismic performance characteristics established by separate OSP.					

Test Summary					
Test Size (kVA)	Width (in)	Depth (in)	Height (in)	Tested Weight (lbs)	Dynamic Test
75	48	48	85.5	2,470	Test 57352R10 UIT2
1000	60	48	85.5	6,810	Test 57700R10 UIT1

FORELL/ELSESSER ENGINEERS, INC.
 Structural Engineers
 160 Pine Street, 6th Floor
 San Francisco, CA 94111

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**Square D - Power-Zone Model III MV Package Unit Substation
Resonant Frequency Summary**

Direction	<u>UUT1</u> 1,000 kVA		<u>UUT2</u> 75 kVA	
	Frequency	Period	Frequency	Period
Front-Back	4.7 Hz	0.21 sec	4.8 Hz	0.21 sec
Side-Side	6.2 Hz	0.16 sec	8.8 Hz	0.11 sec
Vertical	16.0 Hz	0.06 sec	18.0 Hz	0.06 sec



UUT1



UUT2