



APPLICATION FOR PREAPPROVAL SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.
OSP –0263-10

Check whether application is: NEW RENEWAL

<p>1.0 Siemens Healthcare Diagnostics Inc.</p> <hr/> <p style="text-align: center;"><i>Manufacturer</i></p> <p>Glasgow Business Community, # 600</p>	<p>Edward P. Gargiulo, PhD.</p> <hr/> <p style="text-align: center;"><i>Manufacturer's Technical Representative</i></p> <p>P.O. Box 6101 Newark, DE 19714-6101</p>
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Mailing Address

302-631-9577

Telephone

edward.p.gargiulo@siemens.com

E-mail Address

<p>2.0 See Attachment 1</p> <hr/> <p style="text-align: center;"><i>Product Name</i></p>	<p>Uninterruptible Power Supply</p> <hr/> <p style="text-align: center;"><i>Product Type</i></p>
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See Attachment 1 for a listing of Seismically Certified models.

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

General Description: The primary function of UPS units in this service is to allow an orderly shutdown of an attached Siemens Healthcare Diagnostics Analyzer in the event of an unscheduled power interruption. The primary functional requirement is to maintain nominal output power conditions for at least 15 minutes following an input power disruption: (Voltage Regulation +/- 3 % of input utility) (Frequency +/- 0.25Hz of input utility). Approval is limited to units identical to tested units.

<p>3.0 Siemens Healthcare Diagnostics, Inc.</p> <hr/> <p style="text-align: center;"><i>Applicant Company Name</i></p> <p>Glasgow Business Community, Building 600 Mailstop 602, P.O. Box 6101, Newark, DE 19714-6101</p>	<p>Edward P. Gargiulo, PhD.</p> <hr/> <p style="text-align: center;"><i>Contact Person</i></p>
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I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

Edward P. Gargiulo

Signature of Applicant

2/23/2012

Date

Sr. Staff Engineer - Mechanical

Title

Siemens Healthcare Diagnostics, Inc.

Company Name



Registered Design Professional Preparing the Report

4.0 CYS STRUCTURAL ENGINEERS, INC.
 Company Name
 Arthur E. Ross C22430
 Contact Name California License Number
 1760 Creekside Oaks Drive, Suite 280, Sacramento CA 95833
 Mailing Address
 916-920-2020 artr@cyseng.com
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California Licensed Structural Engineer Review and Acceptance of the Report

5.0 CYS STRUCTURAL ENGINEERS, INC.
 Company Name
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Anchorage Pre-Approval

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

Certification Method

7. 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. Environmental Testing Laboratory, Inc. Brady Richard
 Company Name Contact Name
 11034 Indian Trail, Dallas, TX 75229-3513
 Mailing Address
 972-247-9657 brady@etldallas.com
 Telephone E-mail:



9.0 Approval Parameters

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

Design Basis of Equipment or Components (F_p/W_p) = 1.87

S_{DS} (Spectral response acceleration at short period) = 2.6g

a_p (In-structure equipment or component amplification factor) = 1.0

R_p (Equipment or component response modification factor) = 2.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component fundamental period(s) = See Attachment 1

Building period limits (if any) = No Limit

Overall dimensions and weight (or range thereof) = See Attachment 1

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
- Others (Please Specify): Attachment 1

11.0 OSHPD Approval (For Office Use Only)

3/27/2012

December 31, 2016

Signature & Date

Approval Expiration Date

M. R. Karim, SHFR

S_{DS} (g) = **2.6**

z/h = **1.0**

Name & Title

Special Seismic Certification Valid Up to

Condition of Approval (if any):



ATTACHMENT 1: Seismic Certified Components

Table 1 – Seismically Certified Components: Unit Identification

UPS Manufacturer	Model	Serial Number of Tested Unit	Siemens Part No.	UUT ID
Alpha Technologies	Pinnacle Plus 6000T	10085951004	1000037971	1
Falcon Electric	SG2K-1T	1103009031	10471339	2
Powervar	ABCE1100-11B	5411004R-1130023	10330436	3
Powerware	PW5125 2200i	GE303AG383	10701431	4
Powervar	ABCDEF3000-22	2203052R-1130007	10485396	5
EATON Powerware	PW9130i3000T-XL	GE131A0458	103006437-6591	6
EATON Powerware	PW9130i2000T-XL	GE094A0526	10481616	7
Minuteman	CPE1000 PP	KE83110100035	10450063	8
Minuteman	CPE2000	KD97110400105	263100.203	9
Tripp-Lite	SMART700DV	2126DD0SM6346000027	1000033916	10

UUT = Unit Under Test

Table 2 – Seismically Qualified Components: Unit Description

UPS Manufacturer	Model	Size	Weight (lbs.)	Geometry (in.)
Alpha Technologies	Pinnacle Plus 6000T	6 kVA	336.6	10.15Wx27.55Lx39.44H
Falcon Electric	SG2K-1T	2 kVA	68.4	7.6Wx18.9Lx13.8H
Powervar	ABCE1100-11B	1.1 kVA	73	8.3Wx19.75Lx8.75H
Powerware	PW5125 2200i	2200 VA	38	8.07Wx19.41Lx9.84H
Powervar	ABCDEF3000-22	3 kVA	300	11.8Wx31.91Lx28.94H
EATON Powerware	PW9130i2000T-XL	3 kVA	77.2	8.4Wx16.2Lx12.8H
EATON Powerware	PW9130i2000T-XL	2 kVA	77.2	8.4Wx16.2Lx12.8H
Minuteman	CPE1000PP	1 kVA	35	5.8Wx15.8Lx8.78H
Minuteman	CPE2000	2 kVA	64	5.1Wx18.9Lx14.4H
Tripp-Lite	SMART700DV	700 VA	62	9.0Wx12.5Lx10.25H

ATTACHMENT 1: Seismic Certified Components

Table 3A – Lowest Resonant Frequencies of Units Tested: Pre 2.0 S_{DS}

UPS Manufacturer	Model	Vertical Axis (Hz)	Front-to-Back Axis (Hz)	Side-to-Side Axis (Hz)
Alpha Technologies	Pinnacle Plus 6000T	14.92	30.00	13.14
Falcon Electric	SG2K-1T	38.84	None	13.42
Powervar	ABCE1100-11B	42.59	40.55	13.45
Powerware	PW5125 2200i	38.09	46.51	13.37
Powervar	ABCDEF3000-22	20.36	30.00	13.29
EATON Powerware	PW9130i3000T-XL	42.34	48.17	13.45
EATON Powerware	PW9130i2000T-XL	None	None	13.45
Minuteman	CPE1000 PP	None	None	48.27
Minuteman	CPE2000	37.57	22.72	13.29
Tripp-Lite	SMART700DV	45.34	46.14	35.57

Environmental Testing Laboratories Test Report 11977, Page 10 of 182

Table 3B – Lowest Resonant Frequencies of Units Tested: Pre 2.6 S_{DS}

UPS Manufacturer	Model	Vertical Axis (Hz)	Front-to-Back Axis (Hz)	Side-to-Side Axis (Hz)
Alpha Technologies	Pinnacle Plus 6000T	15.36	23.40	13.55
Falcon Electric	SG2K-1T	39.61	None	13.50
Powervar	ABCE1100-11B	27.69	40.16	13.88
Powerware	PW5125 2200i	38.69	None	13.93
Powervar	ABCDEF3000-22	21.51	28.68	16.29
EATON Powerware	PW9130i3000T-XL	36.20	48.08	23.63
EATON Powerware	PW9130i2000T-XL	None	40.47	23.86
Minuteman	CPE1000 PP	None	None	None
Minuteman	CPE2000	22.95	31.94	13.77
Tripp-Lite	SMART700DV	44.29	45.16	32.89

Environmental Testing Laboratories Test Report 11977, Page 10 of 182



CYS

STRUCTURAL ENGINEERS INC.

ATTACHMENT 1: Seismic Certified Components

Plate 1 – Dynamic Testing of Uninterruptible Power Supplies

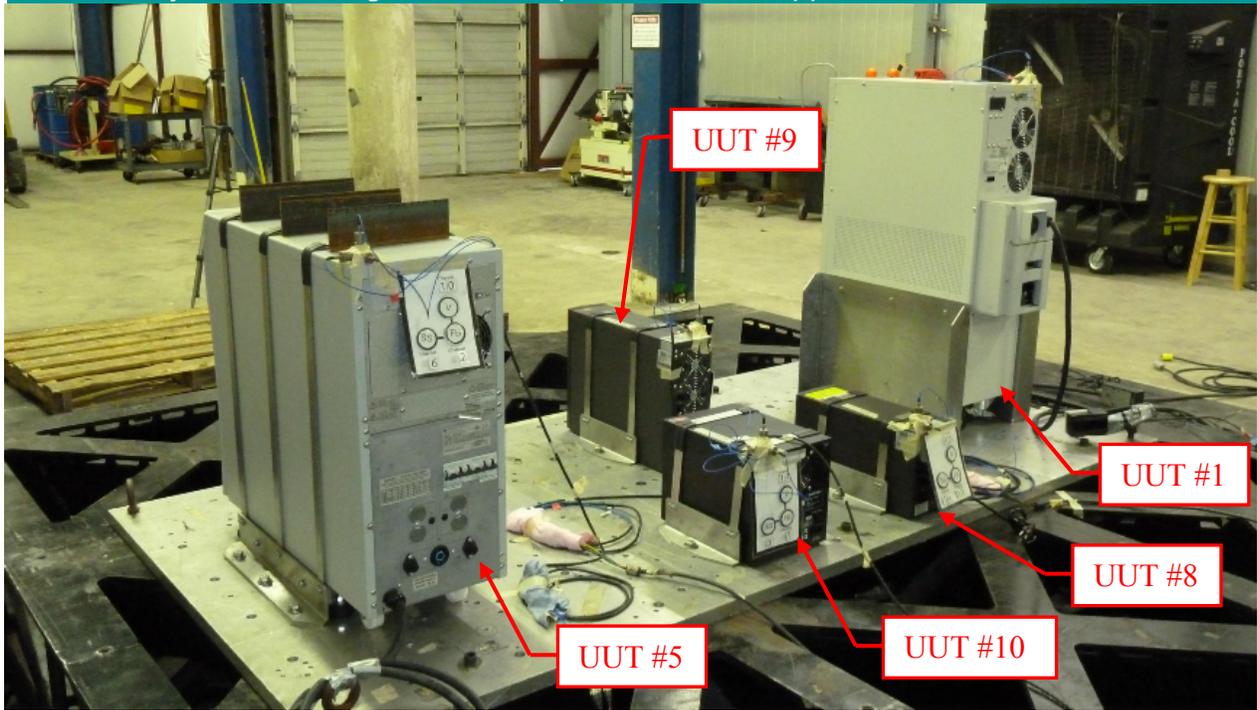


Plate 2 – Dynamic Testing of Uninterruptible Power Supplies

