



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

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

OFFICE USE ONLY

APPLICATION #: **OSP – 0439 – 10**

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: **SIEMENS HEALTHCARE**

Manufacturer's Technical Representative: Mike Poceschi

Mailing Address: 51 Valley Stream Parkway, Malvern, PA 19355

Telephone: (888) 826-9702 Email: On File

Product Information

Product Name: **Biograph mCT Flow PET-CT System & Biograph Horizon PET-CT System**

Product Type: PET & Computed Tomography (CT) medical imaging system.

Product Model Number: See Attachment 1, Table 1

(List all unique product identification numbers and/or part numbers)

General Description: Multiple component systems for the provision of PET & Computed Tomography medical diagnostic imaging. Special Seismic Certification is limited to functions related to CT imaging only.

Mounting Description: See Attachment 1, Table 1.

Applicant Information

Applicant Company Name: **EASE Co.**

Contact Person: Jonathan Roberson, S.E.

Mailing Address: 5877 Pine Ave, Suite 210, Chino Hills, CA. 91709

Telephone: (909) 606-7622 Email: j.roberson@easeco.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant:  Date: November 20, 2015

Title: Principal Engineer Company Name: EASE Co.

"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 10/21/14)



OSHPD



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

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

Company Name: EASE Co.

Name: Jonathan Roberson, S.E. California License Number: S4197

Mailing Address: 5877 Pine Ave, Suite 210, Chino Hills, CA. 91709

Telephone: (909) 606-7622 Email: j.roberson@easeco.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, Inc.

Contact Name: Brady Richard

Mailing Address: 11034 Indian Trail, Dallas, TX 75229-3513

Telephone: (972) 247-9657 Email: brady@etldallas.com

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Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = See Attachment 1, Table 1

S_{DS} (Design spectral response acceleration at short period, g) = See Attachment 1, Table 1

a_p (In-structure equipment or component amplification factor) = See Attachment 1, Table 1

R_p (Equipment or component response modification factor) = See Attachment 1, Table 1

Ω_0 (System overstrength factor) = See Attachment 1, Table 1

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = See Attachment 1, Table 1

Equipment or Component Natural Frequencies (Hz) = See Attachment 2

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

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, 2010: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): Attachments 1 & 2

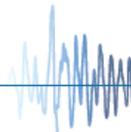
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2019

Signature:  Date: November 25, 2015

Print Name: Timothy J. Piland Title: SSE

Special Seismic Certification Valid Up to : S_{DS} (g) = See Above z/h = See Above

Condition of Approval (if applicable): _____



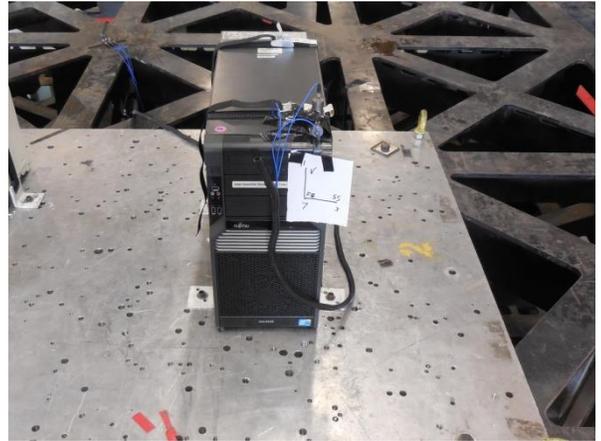
UUT- 1		Horizon PHS						
<i>MANUFACTURER:</i>		Siemens Healthcare						
<i>IDENTIFICATION:</i>		Model No.: 10533010						
<i>DESCRIPTION:</i>		Component of Biograph Horizon PET-CT System						
<i>MOUNTING:</i>		Floor mounted using (30) – ½” diameter grade 8 bolts to interface frame.						
<i>PROPERTIES:</i>								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		Front-Axis	Side-Axis	Vert-Axis		
16	148	46	1560 + 415 patient	3.7	48.4	4.6		
<i>SHAKE TABLE TEST PARAMETERS</i>								
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 2013	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.34	0.54
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



UUT- 2		mCT PHS						
<i>MANUFACTURER:</i>		Siemens Healthcare						
<i>IDENTIFICATION:</i>		Model No.: 10529199						
<i>DESCRIPTION:</i>		Component of Biograph mCT & mCT Flow PET-CT System						
<i>MOUNTING:</i>		Floor mounted using (30) – ½” diameter grade 8 bolts to interface frame.						
<i>PROPERTIES:</i>								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		Front-Axis	Side-Axis	Vert-Axis		
16	148	46	1560 + 415 patient	3.6	47.9	4.6		
<i>SHAKE TABLE TEST PARAMETERS</i>								
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 2013	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.34	0.54
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



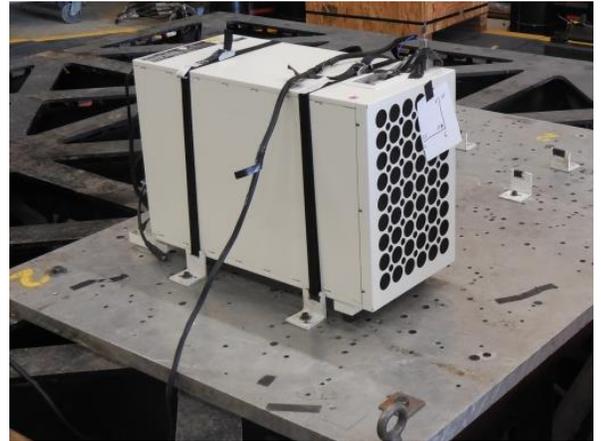
UUT- 3		ICS Tower 11						
MANUFACTURER:		Fujitsu						
IDENTIFICATION:		Model No.: 10590814						
DESCRIPTION:		Component of Biograph mCT Flow PET-CT System						
MOUNTING:		<p>Rigid Base (Floor) Mounted using a strap assembly at front and rear. Each strap assembly consisting of: 1" wide nylon strap w/ metal cam buckle (50 lb tension / 200 lb WLL) looped through slots in vertical legs of (2) – L2½ x 2½ x ¼ x 0'-2½" brackets positioned snug against unit.</p> <p>Each bracket attached w/ 3/8" diameter Allen Head cap screw threaded into aluminum plate. (1 set ea. front & rear, 4 bolts total.)</p>						
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		Transverse-Axis	Longitudinal-Axis	Vertical-Axis		
8.5	20.5	17.5		25.0	37.9	>50		
SHAKE TABLE TEST PARAMETERS								
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 2013	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.34	0.54
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



UUT- 4		IRS 3C						
MANUFACTURER:		Siemens Healthcare						
IDENTIFICATION:		Model No.: 10187110						
DESCRIPTION:		Component of Biograph mCT Flow PET-CT System						
MOUNTING:		<p>Rigid Base (Floor) Mounted using a strap assembly at front and rear. Each strap assembly consisting of: 1" wide nylon strap w/ metal cam buckle (50 lb tension / 200 lb WLL) looped through slots in vertical legs of (2) – L2½ x 2½ x ¼ x 0'-2½" brackets positioned snug against unit.</p> <p>Each bracket attached w/ 3/8" diameter Allen Head cap screw threaded into aluminum plate. (1 set ea. front & rear, 4 bolts total.)</p>						
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		Transverse-Axis	Longitudinal-Axis	Vertical-Axis		
12.6	29.9	20.9		21.9	32.7	41.0		
SHAKE TABLE TEST PARAMETERS								
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 2013	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.34	0.54
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



UUT- 5		IRS 3D						
<i>MANUFACTURER:</i>		Siemens Healthcare						
<i>IDENTIFICATION:</i>		Model No.:	10187111					
<i>DESCRIPTION:</i>		Component of Biograph mCT Flow PET-CT System						
<i>MOUNTING:</i>		<p>Rigid Base (Floor) Mounted using a strap assembly at front and rear. Each strap assembly consisting of: 1" wide nylon strap w/ metal cam buckle (50 lb tension / 200 lb WLL) looped through slots in vertical legs of (2) – L2½ x 2½ x ¼ x 0'-2½" brackets positioned snug against unit.</p> <p>Each bracket attached w/ 3/8" diameter Allen Head cap screw threaded into aluminum plate. (1 set ea. front & rear, 4 bolts total.)</p>						
<i>PROPERTIES:</i>								
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)			
Width	Depth	Height	Front-Axis		Side-Axis	Vert-Axis		
12.6	28	20.9	119	19.8	32.1	35.4		
<i>SHAKE TABLE TEST PARAMETERS</i>								
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 2013	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.34	0.54
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



UUT- A1 Horizon 3-Ring PET- CT Gantry										
MANUFACTURER:		Siemens Healthcare								
IDENTIFICATION:		PET Model No.: 10532494								
		CT Model No.: 10891666								
DESCRIPTION:		Component of Biograph Horizon PET-CT System								
MOUNTING:		Rigid Base (Floor) Mounted using: (32) ½" dia GR 8 bolts								
										
PROPERTIES:										
DIMENSIONS (in.)					Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height				Front-Axis	Side-Axis	Vert-Axis		
PET	92.3	11.3	80.2	5795		8.3	6.8	25.8		
CT	89.6	26.8	71.7	(includes 500lb mounting plate)						
SHAKE TABLE TEST PARAMETERS										
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 2013	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.34	0.54		
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test										

UUT- A2 Horizon 4-Ring PET- CT Gantry										
MANUFACTURER:		Siemens Healthcare								
IDENTIFICATION:		PET Model No.: 10532307								
		CT Model No.: 10891666								
DESCRIPTION:		Component of Biograph Horizon PET-CT System								
MOUNTING:		Rigid Base (Floor) Mounted using: (32) ½" dia GR 8 bolts								
										
PROPERTIES:										
DIMENSIONS (in.)					Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height				Front-Axis	Side-Axis	Vert-Axis		
PET	92.3	11.3	80.2	5880		7.7	6.7	25.3		
CT	89.6	26.8	71.7	(includes 500lb mounting plate)						
SHAKE TABLE TEST PARAMETERS										
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 2013	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.34	0.54		
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test										

UUT- A3 Image Control System (ICS)									
MANUFACTURER: Fujitsu									
IDENTIFICATION: Model No.: 10864201									
DESCRIPTION: Component of Biograph Horizon PET-CT System									
MOUNTING: Rigid Base (Floor) Mounted using a strap assembly at front and rear. Each strap assembly consisting of: 1" wide nylon strap w/ metal cam buckle (50 lb tension / 200 lb WLL) looped through slots in vertical legs of (2) – L2½ x 2½ x ¼ x 0'-2½" brackets positioned snug against unit. Each bracket attached w/ 3/8" diameter Allen Head cap screw threaded into aluminum plate. (1 set ea. front & rear, 4 bolts total.)									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height			Front-Axis	Side-Axis	Vert-Axis		
7 – 3/8	18 – 7/8	16 – 7/8		34	24.7	42.7	>50		
SHAKE TABLE TEST PARAMETERS									
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 2013	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.34	0.54	
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test									

UUT- A4 LCB (LINE CONTROL BOX)									
MANUFACTURER: Siemens Healthcare									
IDENTIFICATION: Model No.: 10165884									
DESCRIPTION: Component of SOMATOM Perspective CT System									
MOUNTING: Floor mounted using (4) – 3/8" dia GR 8 Allen head cap bolts through holes tapped in aluminum interface plate.									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height			F/B Axis	S/S Axis	Vert Axis		
11.75	29.375	31.5		248.5	13.9	25.3	>50		
SHAKE TABLE TEST PARAMETERS									
CODE	TEST CRITERIA	S _{DS}	z/h	I _P	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2013	ICC-ES AC156-10	2.0	1.0	1.5	3.20	2.40	1.34	0.54	
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test									