



# APPLICATION FOR PREAPPROVAL SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

<b>APPLICATION NO.</b>
<b>OSP – 0085-10</b>

Check whether application is: NEW  RENEWAL

1.0 GE Healthcare T. Farnow  
*Manufacturer* *Manufacturer's Technical Representative*  
586 Millfront Ave., Yuba City, CA 95991  
*Mailing Address*

(530) 671-9120

*Telephone*

*E-mail Address*

2.0 SEE ATTACHMENT 1 CT & PET-CT Systems  
*Product Name* *Product Type*

SEE ATTACHMENT 1

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

*General Description:* Multi-component Computed Tomography (CT) systems and combined Positron Emission Tomography- Computed Tomography (PET-CT) systems used for medical imaging.

3.0 EQUIPMENTANCHORAGE.COM JONATHAN ROBERSON, S.E.  
*Applicant Company Name* *Contact Person*

5877 Pine Ave, Suite 210, Chino Hills, CA. 91709

*Mailing Address*

(406) 541-EASE (3273)

*Telephone*

jon@easeco.com

*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.

  
*Signature of Applicant*  
**SENIOR ENGINEER**  
*Title*

March 25, 2010

*Date*

EQUIPMENTANCHORAGE.COM  
*Company Name*



**Registered Design Professional Preparing the Report**

**4.0 Environmental Testing Laboratory**

Richard La Brie, P.E.		Company Name	C-45902
2801 Connery Way, Suite B, Missoula, MT 59808		Contact Name	California License Number
(406) 541-EASE (3273)		Mailing Address	labrie@easeco.com
		Telephone	E-mail Address

**California Licensed Structural Engineer Review and Acceptance of the Report**

**5.0 EQUIPMENTANCHORAGE.COM**

Jonathan Roberson, S.E.		Company Name	S4197
5877 Pine Ave, Suite 210, Chino Hills, CA. 91709		Contact Name	California License Number
909-606-7622		Mailing Address	jon@easeco.com
		Telephone	E-mail Address

**Anchorage Pre-Approval**

- 6.0  Anchorage is pre-approved under OPA- **Pending, SEE ATTACHMENT 3**  
 (Separate application for anchorage pre-approval is required)
- Anchorage is not Pre-approved

**Certification Method**

70.  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)**

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



Approval Parameters

9.0

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

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 2.32g

$S_{DS}$  (Spectral response acceleration at short period) = 1.93g

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

$R_p$  (Equipment or component response modification factor) = 1.5

$I_p$  (Importance factor) = 1.5

$z/h$  (Height factor ratio) = 1.0

Equipment or Component fundamental frequency(s) = SEE ATTACHMENT 2

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

$\Omega_0$  (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): SE Acceptance Letter; Attachment 1; Attachment 2;

11.0 OSHPD Approval (For Office Use Only)

 Signature & Date <b>Chris Tokas, SHFR</b> Name & Title	6/23/10	December 31, 2013 Approval Expiration Date
		$S_{DS}$ (g) = <b>1.93</b> $z/h$ = <b>1.0</b>
Condition of Approval (if any): <b>ONLY CT Scanner part of the PET-CT 600 Scanner is approved. Both PET &amp; CT Scanners for the PET-CT 690 is approved.</b> Special Seismic Certification Valid Up to		



# APPLICATION FOR PREAPPROVAL

## SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

### ATTACHMENT 1: Seismically Certified Systems & Components

Note: Seismic certification of all units in the following tables is limited to components that are installed free-standing and floor-mounted to the supporting structure.

<u>Gantries</u>					
GE HEALTHCARE SYSTEM NAME	Component Designation	W (in)	D (in)	H (in)	WT. (lbs.)
Discovery CT750 HD	Discovery CT750 HD Gantry	89.25	39.7	74.6	4050
LightSpeed VCT	LightSpeed VCT Gantry	89.25	39.7	74.6	4050
BrightSpeed Elite	BrightSpeed Elite Gantry	81	40.1	76	3899
BrightSpeed (Elite/Edge/Excel) Select	BrightSpeed (Elite/Edge/Excel) Select Gantry	81	40.1	76	3899
LightSpeed Pro 16 Slice	LightSpeed Pro 16 Slice Gantry	86.6	39.4	74.6	4344
LightSpeed Ultra 16 Slice	LightSpeed Ultra 16 Slice Gantry	86.6	39.4	74.6	4064
LightSpeed RT 16 Slice	LightSpeed RT 16 Slice Gantry	96	39.6	78.4	3891
LightSpeed RT 4 Slice	LightSpeed RT 4 Slice Gantry	96	39.6	78.4	3891
Discovery PET/CT 690	BrightSpeed CT Gantry	81	40.1	76	3899
Discovery PET/CT 690	LightSpeed VCT CT Gantry	89	39.7	76	4079
Discovery PET/CT 690	Discovery PET 690 Gantry	81	40	76	4631

<u>Patient Tables</u>					
GE HEALTHCARE SYSTEM NAME	Component Designation	W (in)	D (in)	H (in) min/max	WT. (lbs.)
Discovery CT750 HD; LightSpeed VCT; LightSpeed RT 16	GT 1700 Table	25.6	95.9	18.3/41.3	875
Discovery CT750 HD; LightSpeed VCT; LightSpeed RT 16	GT 2000 Table	25.6	114.5	18.3/41.3	1250
BrightSpeed Elite	Patient Table	25.6	93.3	16.9/39	1059
BrightSpeed (Elite/Edge/Excel) Select	Patient Table	26	92	19/ 35	707
LightSpeed Pro 16 Slice; LightSpeed Ultra 16 Slice; LightSpeed RT	Patient Table	24.3	94	22.1/41.7	735
Discovery PET/CT 600; Discovery PET/CT 690	PROSCAN Patient Table	25.6	135.8	22/ 42	1808

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### ATTACHMENT 1: Seismically Certified Systems & Components

<b>POWER DISTRIBUTION UNIT</b>					
<b>GE HEALTHCARE SYSTEM NAME</b>	<b>Component Designation</b>	<b>W (in)</b>	<b>D (in)</b>	<b>H (in)</b>	<b>WT. (lbs.)</b>
Discovery CT750 HD; LightSpeed VCT; BrightSpeed Elite; BrightSpeed (Elite/Edge/Excel) Select; LightSpeed Pro 16 Slice; LightSpeed Ultra 16 Slice; LightSpeed RT 16; Discovery PET/CT 600; Discovery PET/CT 690	NGPDU-4	27.6	21.7	41.8	800
LightSpeed RT	NGPDU-3	27.6	21.7	41.8	700

<b>RECONSTRUCTION RACK</b>					
<b>GE HEALTHCARE SYSTEM NAME</b>	<b>Component Designation</b>	<b>W (in)</b>	<b>D (in)</b>	<b>H (in)</b>	<b>WT. (lbs.)</b>
Discovery PET/CT 600; Discovery PET/CT 690	PARC PLUS	25	40	56	700

<b>OPERATOR CONSOLE</b>					
<b>GE HEALTHCARE SYSTEM NAME</b>	<b>Component Designation</b>	<b>W (in)</b>	<b>D (in) min/max</b>	<b>H (in) min/max</b>	<b>WT. (lbs.)</b>
Discovery CT750 HD ; LightSpeed RT 16; LightSpeed RT	Global Operators Console (GOC)	48.7	40.1/48.4	26.7/34.8	524
LightSpeed VCT	GOC5	48.7	40.1/48.4	26.7/34.8	395
LightSpeed VCT	690 GOC6 Console w/ VRB	48.7	40.1/48.4	26.7/34.8	430
BrightSpeed Select	GOC	48.8	44.7/48.6	26.8/34.8	470
LightSpeed Pro 16 Slice	GOC	48.7	40.1/48.4	26.7/34.8	450
LightSpeed Ultra 16 Slice	GOC	48.7	40.1/48.4	26.7/34.8	450
Discovery PET/CT 600; Discovery PET/CT 690	GOC4 / GOC5 / GOC6.5	49	48	32 (min.)	547



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SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS**

**ATTACHMENT 2: Test Specimen Characteristics**

Description	Width (in.)	Depth (in.)	Height (in.)	Weight (lb.)	Mount	Lowest Resonant Freq. (Hz.) <sup>A</sup>		
						F/B	S/S	Vert.
<b>TEST GROUP 1: GE HEALTHCARE LightSpeed VCT System</b>								
LightSpeed VCT 64 Gantry	89.2	39.6	74.6	4200	Floor	5.3	6.9	15
Patient Table, Model GT 2000	25.8	226.7	41.3	1250	Floor	3.5	8.5	8.5
PDU, Model NGPDU-4	27.8	21.7	41.8	800	Floor	11	21	18
Operator Console, Model GOC6	48.7	48.3	34.8	550	Floor	22	8.5	18.5
Recon Rack, Model PARC Plus	24.2	40.2	59.9	700	Floor	22	3	17
<b>TEST GROUP 2: GE HEALTHCARE Discovery PET/CT 600/690 System</b>								
Brightspeed CT Gantry	89.2	39.6	74.6	4200	Floor	7.5	6.8	12
Discovery PET 690 Gantry	81	48.3	74.6	4550	Floor	9	9.2	15
PETSCAN Patient Table	25.8	226.7	41.3	1250	Floor	--- <sup>B</sup>	5.3	> 33
<b>TEST GROUP 3: GE HEALTHCARE Lightspeed RT 4-slice</b>								
LightSpeed 4-slice Gantry (B79-96)	89.2	39.6	74.6	4200	Floor	5.3	6.9	15

Notes:

A) F/B = Front-to-Back Axis; S/S = Side-to-Side Axis; Vert. = Vertical Axis

B) Probable instrumentation error

*L/R*

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## SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

### ATTACHMENT 3: Pending OSHPD Anchorage Pre-Approvals (OPAs)

GE HEALTHCARE SYSTEM	COMPONENT:	OPA-10 <sup>P</sup>
<b>Discovery CT750 HD</b>		
	Gantry	2045-10
	Patient Table (GT1700)	2046-10
	Patient Table (GT2000)	2047-10
	Operator Console	2048-10
	Power Distribution Unit	2049-10
<b>LightSpeed VCT</b>		
	Gantry	0717-10
	GT 2000 Table	0718-10
	GT 1700 Table	0750-10
	Operator's Console	0992-10
	Power Distribution Unit	0993-10
<b>BrightSpeed Elite</b>		
	Gantry	2455-10
	Patient Table CT1	2456-10
	Power Distribution Unit	2457-10
<b>BrightSpeed Select</b>		
	Gantry	1653-10
	Patient Table	1654-10
	Power Distribution Unit	1655-10
	Operator's Console	1656-10
<b>LightSpeed Pro 16 Slice</b>		
	Gantry	0847-10
	Patient Table	0848-10
	Power Distribution Unit	0849-10
	Operator's Console	0850-10
<b>LightSpeed Ultra 16 Slice</b>		
	Gantry	0851-10
	Patient Table	0852-10
	Power Distribution Unit	0853-10
	Operator's Console	0854-10
<b>LightSpeed RT 16 Slice</b>		
	Gantry	1590-10
	GT 2000 Table	1591-10
	GT 1700 Table	1592-10
	Operator's Console	1593-10

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GE HEALTHCARE SYSTEM	COMPONENT:	OPA-10 <sup>P</sup>
	Power Distribution Unit	1594-10
<b>LightSpeed RT 4 Slice</b>		
	Gantry (CTT)	0861-10
	Patient Table	0862-10
	Operator's Console	0863-10
	Power Distribution Unit	0864-10
<b>Discovery PET/CT 600/690</b>		
	Recon Rack	2052-10
	Gantry	2061-10
	Operator's Console	2062-10
	Patient Table	2063-10
	Power Distribution Unit	2064-10